

**A STUDY ON NAADI EXAMINATION IN VIPPURUTHI/PUTRU -
A RANDOMIZED AND BLINDED CASE CONTROL STUDY**



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October - 2017

DECLARATION BY THE CANDIDATE

I hereby declare that this Dissertation entitled “*A Study on Naadi Examination in Vippuruthi / Putru - A randomized and blinded case control study*” is a bonafide and genuine research work carried out by me under the guidance of **Dr. G. J. Christian M.D(S)**, HOD (i/c), Dept of Noi Naadal, National Institute of Siddha, Chennai – 47, and the dissertation has not formed the basis for the award of any degree, Diploma, Fellowship or other similar title.

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INTRODUCTION

Siddha system of medicine is a unique and potent traditional system of medicine which focuses light on physical, mental, social, moral and spiritual well being of an individual. Siddhars have classified diseases based on the derangement of three humors namely Vatham, Pitham and Kabam. Diseases of mankind are classified into four thousand four hundred and fourty eight types of diseases.

"நோய்நாடி நோய்முத னாடி யதுதணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்"

-Thirukkural

As per the above couplet by Sage Thiruvalluvar, diagnosis of diseases is an important factor in any system of medicine; unless the diagnosis is correct, however good the treatment is, it will end-up in vain not having cleared the clearing the root cause.

"நாடிப்பரிசம் நாநிறம் மொழிவிழி
மலம் மூத்திரமிவை மருத்து ராயுதம்"

-Theraiyar

Hence to arrive at the proper diagnosis, Sage Theraiyar has explained eight types of diagnostic methods in his text, which is called "Envagai Thervu" (Eight folded examination). It consists of examination of Naadi(Pulse), Sparisam(Touch), Naa(Tongue), Niram(Colour), Mozhi(Voice), Vizhi(Eyes), Malam(Faeces)and Neer(Urine). Among these eight diagnostic tools, Naadi is considered to be the best and reliable factor and the Siddha Physicians were experts in this diagnostic method, and perceive the offending problem perfectly, without interrogations.

"நாடி என்றால் நாடியல்ல நரம்பில் தானே,
நலமாகத் துடிக்கின்ற துடிதானு மல்ல,
நாடி என்றால் வாதபித்த சிலேற்பனமு மல்ல,
நாடி எழுபத் தீராயிரந் தானு மல்ல
நாடி என்றால் அண்டரெண்டமெல்லாம்
நாடி எழுவகைத் தோற்றுத்துள்ளாய்நின்ற
நாடியது யாராய்ந்து பார்த்தா ரானால்
நாடியுறும் பொருள் தெரிந்து நாடுவாரே",

-Sathaga Naadi

Naadi is nothing but, manifestation of the vital energy that sustains the life within our body. Any variations that occur in the three humors are reflected in the Naadi perception. These three humors organize, regularize and integrate basic functions of the human body. So Naadi serves as a good indicator of all ailments .The Naadi or Pulse can be recorded one inch below the wrist laterally over the Radial artery. By keenly feeling for the pulsation, diagnosis, prognosis of disease, signs of death and incurability can be assessed clearly.

Naadi should be felt and sensed by keeping in mind the period, place, age and severity of the disease. Physicians as well as the patients had full faith and confidence on Naadi since the practice of pulse reading was so perfect. Sage Agasthiyar has described the growth of the foetus through Naadi. He propounded the theory of pulse in his various texts (about 736 verses in Pathinen Siddhars Naadi Sasthiram). Every one of the Siddhars has pointed out the importance of the Naadi and described the methods of observations and treatment according to the patterns of the Naadi. Naadi is a unique diagnostic method of Siddha system of Medicine. So, the art of pulse is a boon for the Siddha physician in finding out the exact nature of diseases without the aid of appliances and they mastered and used it successfully.

Naadi based diagnosis also has the advantage of being inexpensive, non-invasive, and painless desk side quick diagnostic tool. The practitioners ‘feel’ for a certain pattern in the pulse which forms the basis of their diagnosis and the imbalance of humors and disease states can be detected in their early stages giving one the opportunity to correct them before they affect the quality of life.

The most predominant of the degenerated diseases in the world today is Vippuruthi/Puttru (Cancer), which ranks second only to cardiovascular disease. In Siddha system of medicine, Cancer is defined as Puttru noi, a disease developed in the body like a mound over a nest of termites, a destructive social insect of neuropterans order.

Vippuruthi/Puttru (Cancer) is a potentially fatal condition caused mainly by environmental factors that mutated genes encoding critical cell-regulatory proteins. Vippuruthi/ Puttru (T.V.Sambasivam pillai) are very harmful because all the three major humors loose mutual co-ordination and thus cannot prevent proliferation of cells, resulting in deadly morbid condition.

Here, Siddha literature deals with various types of malignancies, mentioned by Siddhars. Sage Yugi, used the term Vippuruthi and Dhunmangism in his text Yugi vaidhya chinthamani which can be correlated with cancer. Some of other interesting texts like Agathiyar Rana Vaithyam, Nagamuni nayanavithi, Agathiyar Nayanavithi deal with cancer as Puttru (Naaku puttru, Sevi puttru, Vaai puttru) which are cancer of tongue, ear and oral cavity.

Vippuruthi/Puttru (cancer) is a leading cause of morbidity and mortality worldwide, with approximately 14.1 million new cases and 8.2 million deaths in a year. In developing countries more often result in death generally diagnosed at late stage and the resources for early detection and treatment are limited. Hence, the early diagnosis and management of patients with cancer is very vital and can be cured if diagnosed early.

In order to determine the effectiveness of Naadi diagnosis of cancer, a small effort is made to throw the light over Naadi or pulse Examination. Naadi Examination is obviously non costly and can help immensely in picking up a insidious onset of a malignant condition on incidental routine examination of Naadi.

Thus if proven and established , it can serve as a powerful tool of early cancer detection which can help the patient to take appropriate treatment at the appropriate time to get cured and extend the life time of the patient. It is important to diagnose cancer in early stage. Early detection of cancer greatly increases the chances for successful treatment. Through early diagnosis and screening we can prevent the cancer relegating to metastasis condition of Cancer. Early detection is the key for very essential to effectively treating cancer and saving lives of cancer patients.

AIM AND OBJECTIVES

AIM

- To Determine and Document the usefulness of Naadi Examination in detecting Vippuruthi / Puttru

OBJECTIVE

PRIMARY OBJECTIVE

- To carry out a blinded examination of Naadi in a randomized group of Cancer and Healthy volunteers

SECONDARY OBJECTIVE

- To find out the Siddha investigation parameters by other Ennvagai thervu, Neer kuri, Neikuri , Yakkai illakanam and Manikadai Nool for Vippuruthi /Puttru

REVIEW OF LITERATURE – SIDDHA

SIDDHA PHYSIOLOGY

All the existing things in this world and universe around it are made up by the five basic elements namely Man (Earth), Neer (Water), Thee (Fire), Kaal (Air) and Aagayam (Space) are called the Panja Boothams (Fundamental Elements). These elements constituting the human body and other worldly substances are explained as Panchaakaranam (Mutual Intra Inclusion). Anyone of these elements cannot act independently by itself. They can act only in co-ordination of the other four elements. The living creatures and the non-living things are made up of these five elements.

உலகம் பஞ்ச பூதம்

"நிலம் நீர்தீவளி விசும்போடைந்தும்

கலந்தமயக் கமுலகம் இது.

– தொல்காப்பியம்

தேகம் பஞ்ச பூதம்

"தலங்காட்டி இந்தச் சடமான ஐம்பூதம்

நிலங்காட்டி நீர் காட்டி நின்றிடுந் தீ காட்டி

வலங்காட்டி வாயுவால் வளர்ந்தே இருந்தது

குலங்காட்டி வானில் குடியாய் இருந்ததே

– பதினெண் சித்தர் நாடி சாஸ்திரம்.

As per the above lines the Universe and the Human Body are made of five elements.

A.THE 96 BASIC PRINCIPLES (96 THATHUVAM) :

According to Siddha system of medicine, 'Thathuvam' is considered as a science that deals with basic functions of the human body. Siddhars described 96 principles as the

basic constituents of human body that include physical, physiological, psychological and intellectual components of an individual. These 96 Thathuvams are considered to be the cause and effect of our physical and mental well-being. The Thathuvam is the author of the conception of human embryo on which the theory of medicine is based.

1. BOOTHAM - 5 (ELEMENTS)

- Man - Earth
- Neer - Water
- Thee - Fire
- Vaayu - Air
- Aagayam - Space

2. PORI - 5 (SENSORY ORGANS)

- Mookku (Nose) - It is a component of Mann bootham
- Naakku (Tongue) - It is a component of Neer bootham
- Kan (Eye) - It is a component of Thee bootham
- Thol (Skin) - It is a component of Vaayu bootham
- Kadhu (Ear) - It is a component of Aagayam bootham

3. PULAN - 5 (FUNCTIONS OF SENSORY ORGANS)

- Nugarthal - Smell : It is a component of Mann bootham
- Suvaithal - Taste : It is a component of Neer bootham
- Paarthal - Vision : It is a component of Thee bootham
- Thoduthal - Touch : It is a component of Vaayu bootham
- Kettal - Hearing: It is a component of Aagayam bootham

4. KANMENTHIRIYAM - 5 (MOTOR ORGANS)

- Vaai (Mouth) - The speech occur in relation with Space element
- Kaal (Leg) - The walking take place in relation with Air element
- Kai (Hands) - Giving and taking are carried out with Fire element
- Eruvaai (Rectum) - The excreta is removed in association with waterelement
- Karuvaai (Genital Organ) - Sexual acts are carried out in association with earth element

5. KARANAM - 4 (INTELLECTUAL FACULTIES)

- Manam - Thinking about a thing
- Bhuddhi - Deep thinking or analyzing of the thought

- Siddham - Determination to achieve it
- Agankaaram - Achievement faculty

6. ARIVU - 1 (WISDOM OF SELF REALIZATION)

7. NAADI - 10 (Channels of Life Force responsible for the Dynamics of Pranan)

- Idakalai - Starts from the right big toe and ends at the left nostril.
- Pinkalai - Starts from the left big toe and ends at the right nostril.
- Suzhimunai - Starts from moolaathaaram & extend upto centre of head.
- Siguvai - Located at the root of tongue, helps in swallowing food.
- Purudan - Located in right eye.
- Kanthari - Located in left eye.
- Aththi - Located in right ear.
- Alampudai - Located in left ear.
- Sangini - Located in genital organs.
- Gugu - Located in anorectal region.

8. VAYU - 10 (Vital nerve force which is responsible for all kinds of movements)

• PIRANAN (UYIR KAAL)

This is responsible for the respiration of the tissues, controlling Knowledge, mind and five sense organs and digestion of the food taken in.

• ABANAN (KEEL NOKKU KAAL)

It lies below the umbilicus. It is responsible for the downward expulsion of stools and urine, ejaculation of semen and menstruation.

• VIYANAN (PARAVU KAAL)

This is responsible for the motor and sensory functions of the entire body and the distribution of nutrients to various tissues.

• UTHANAN (MAEL NOKKU KAAL)

It originates at Utharakini. It is responsible for digestion, absorption and distribution of food. It is responsible for all the upward movements.

• NADUKKAAL (SAMAANAN)

This is responsible for the neutralization of the other 4 Valis i.e. Piranan, Abanan, Viyanan and Uthanan. Moreover it is responsible for the nutrients and water balance of the body.

- **NAAGAN**

It is a driving force of eye balls and responsible for their movements.

- **KOORMAN**

It is responsible for the opening and closing of the eyelids and also vision. It is responsible for yawning.

- **KIRUKARAN**

It is responsible for the salivation of the tongue and also nasal secretion. Responsible for cough and sneezing and induces hunger.

- **DEVATHATHAN**

This aggravates the emotional disturbances like anger, lust, and frustration etc. As emotional disturbances influence to a great extent the physiological activities, it is responsible for the emotional upsets.

- **DHANANCHEYAN**

Expelled 3 days after the death by bursting out of the cranium. It is responsible for edema, plethora and abnormal swelling in the body in the pathological state.

9. ASAYAM - 5 (VISCERAL CAVITIES)

- **Amarvasayam (Reservoir organ):** Stomach (digestive organ). It lodges the ingested food.
- **Pakirvasayam (Digestive site):** Small Intestine. The digestion of food separation and absorption of saaram from the digested food are done by this asayam.
- **Malavasayam (Excretory organ for the solid waste):** Large Intestine, especially rectum. Responsible for the expulsion of undigested food parts and flatus.
- **Salavasayam (Excretory organ for the liquid waste):** Urinary Bladder, Kidney. Responsible for the formation and excretion of urine.
- **Suckilavasayam (Genital organs):** Place for the formation and growth of the sperm and ovum

10. KOSAM - 5 (FIVE STATES OF THE HUMAN BODY OR SHEATH)

- **Annamaya Kosam** - Physical Sheath (Gastro intestinal system)
- **Pranamaya Kosam** - Respiratory Sheath (Respiratory system)
- **Manomaya Kosam** - Mental Sheath (Cardio vascular system)
- **Vignanamaya Kosam** - Intellectual Sheath (Nervous system)
- **Ananthamaya Kosam** - Blissful Sheath (Reproductive system)

11. AATHARAM - 6 (STATIONS OF SOUL)

- **MOOLADHARAM** : Situated at the base of the spinal column between genital organ and analorifice. Letter “Xk;” is inscribed
- **SWATHITANAM** : Located 2 finger above the Mooladharam, (i.e) between genital and navalregion. Letter “e” is Inscribed. Earth element attributed to this region.
- **MANIPOORAGAM** :Located 8 finger above the Swathitanam, (i.e) at the naval center. Letter “k” is inscribed. Element is water.
- **ANAKATHAM** : Located 10 finger above Manipooragam, (i.e) location of heart. Letter “rp” is inscribed. Element is Fire.
- **VISUTHI** : Located 10 fingers above the Anakatham (i.e) located in throat. Letter “t” is inscribed. Element is Air.
- **AAKINAI** : Located between two eyebrows. Element is Space. Letter “a” is inscribed.

12. MANDALAM - 3 (REGIONS)

- **Thee Mandalam (Agni Mandalam)**: Fire Region found 2 fingers width above the Mooladharam.
- **Gnayiru Mandalam (Soorya Mandalam)**: Solar Region, located with 4 fingers width above the umbilicus.
- **Thingal Mandalam (Chandra Mandalam)**: Lunar Region, located at the center of two eye brows.

13. MALAM - 3 (THREE IMPURITIES OF THE SOUL):

- **AANAVAM** : This act makes clarity of thought, knowing power of the soul, yielding to the Egocentric consciousness like 'I' and 'Mine' considering everything is to his own.
- **KANMAM**: Goes in collusion with the other two responsible for incurring Paavam (the Sin) and Punniyam (virtuous deed).
- **MAYAI** : Climbing ownership of the property of someone else and inviting troubles.

14. THODAM - 3 (THREE HUMOURS)

- **VALI (VATHAM)**: It is creative force, formed by Vaayu & Aakaya bootham
- **AZHAL (PITHAM)**: It is protective force, formed by Thee bootham
- **IYYAM (KABAM)** : It is destructive force, formed by Mann & Neer bootham

15. EADANAI - 3 (PHYSICAL BINDINGS)

- **Porul Patru** - Material Bindings
- **Puthalvar Patru** - Offspring Bindings
- **Ulaga Patru** - Worldly Bindings

16. GUNAM - 3 (THREE COSMIC QUALITIES)

- **Sathuva Gunam (Characters of Renunciation or Ascetic Virtues)**: The grace, control of sense, wisdom, penance, generosity, excellence, silence and truthfulness are the 8 traits
- **Raso Gunam (Characters of Ruler)**: Enthusiasm, wisdom, valour, virtue, offering gift, art of learning and listening are the 8 traits
- **Thamo Gunam (Carnal and Immoral Characters)**: Immortality, lust, killing laziness, violation of justice, gluttonousness, falsehood, forgetfulness and fraud

17. VINAI - 2 (ACTS) :

- **Nalvinai**- Good Acts
- **Theevinai** - Bad Acts

18. RAGAM - 8 (THE EIGHT PASSIONS) :

- **Kaamam** - Desire
- **Kurotham** - Hatred
- **Ulobam** - Stingy
- **Moham** - Lust (Intense or Sexual desire Infatuation)
- **Matham** - Pride (The feeling of respect towards yourself)
- **Marcharyam** - Internal Conflict
- **Idumbai** - Mockery
- **Ahankaram** - Ego

19. AVATHAI - 5 (FIVE STATES OF CONSCIOUSNESS)

- **NINAIVU**: Wakefulness with the 14 karuvikaranathigal (5 pulan, 5 kanmaenthiriyam and 4 karanam) and feels the good and sad things.
- **KANAVU**: Dreams. In these 10 karuvi karanathigal (5 pulan, 5 kanmaenthiriyam) except karanam present in the neck.
- **URAKKAM**: Sleep. The state in which hearing and seeing can't explained to others. The respiration present in the heart.
- **PERURAKKAM**: Repose (Tranquil or Peaceful State). The seevaanma stands in the naabi, producing the respiration.
- **UYIRPADAKKAM**: Oblivious of Surroundings. The seevaanma goes to moolathaaram and produce insensibility.

UYIR THATHUKKAL:

The physiological units of the Human body are Vali (Vatham), Azhal (Pitham) and Iyyam (Kabam). They are also formed by the combination of the five elements.

- Vaatham = Vali+Aagayam : Creative force
- Pitham = Thee + Force of preservation
- Kabam = Man+Neer : Destructive force

As per the above lines the Universe and the human body are made of five elements. These three humours are in the ratio 1:½:¼ in equilibrium or Normal condition, they are called as the Life forces.

SITES OF UYIR THATHUKKAL:

பொங்கிய தைந்துக்குள் பொல்லாதது இம் மூன்றும்தான்
தங்கிய வாயு சமத்தன் மகாவாதம்
பங்கிய வன்னியால் பகுந்தது நல்லையும்
பகுந்த சலத்தில் பாசிக்கும் நல்லையும்
வகுந்த இம்மூன்றால் வளர்த்தது நோயெல்லாம்
அகுந்தது தானறிந்து அளவிட்ட யோகிகள்
மகிழ்ந்தே யிதில் நின்ற மயக்கம் அறிவாறே"

—பதினெண் சித்தர் நாடி சாஸ்திரம்.

FORMATION OF UYIR THATHUKKAL :

"தாது முறையெ தனிஇடை வாதமாம்
போதுறு பின்கலை புகன்றது பித்தமாம்
மாது சுழிமுனை வழங்கிடும் ஐயமாம்
ஒரு முறை பார்த்து உணர்ந்தவர் சித்தரே"

—பதினெண் சித்தர் நாடி சாஸ்திரம்.

"உணர்ந்த அபானன் உறும் அந்த வாதத்தில்
புணர்ந்த பிராணன் புகும் அந்தப் பித்தத்தில்
அணைந்த சமானன் அடங்கும் கபத்தொடு
இணைந்திவை மூன்றுக்கு எடுத்தகுறி ஒன்றே"

—பதினெண் சித்தர் நாடி சாஸ்திரம்

- Vali = Abanan+Idagalai
- Azhal = Piranan+Pinkalai
- Iyyam = Samanan+Suzhimunai

I. VALI (VATHAM) :

- NATURE OF VALI :

Vali is soft, fine and the temperature (coolness and hotness) could be felt by touch.

- SITES OF VALI :

"நெளிந்திட்ட வாதமபானத்தைப் பற்றி
நிறைந்திடையைச் சேர்ந்துந்திக் கீழே நின்று
குளிந்திட்ட மூடமதூா டெழுந்து காமக்
கோடியிடையைப் பற்றியெழுங் குணத்தைப் பாரே
குணமான வெலும்பைமேற் றொக்கை நாடி
நிணமான பொருத்திடமும் ரோமக் காலும்
நிறைவாகி மாங்கிசமெல் லாம்பரந்து"

– வைத்திய சதகம்

According to Vaithya sathakam, vali dwells in the following places: They are Umbilicus, rectum, faecal matters, abdomen, anus, bones, hip joint, navel plexus, joints, hair follicle and muscles.

"அறிந்திடும் வாத மடங்கு மலத்தினில்"

– திருமூலர்

"நாமென்ற வாதத்துக் கிருப்பிடமே கேளாய்

நாபிக்குக் கீழென்று நவில லாகும்"

– யூகி முனிவர்

According to Sage Thirumoolar and Yugi muni, the places of vatham are the anus and below the naval region.

- PROPERTIES OF VALI :

"ஒழுங்குடனே தாதேழ் மூச்சோங்கி இயங்க
எழுச்சிபெற எப்பணியுமாற்ற எழுந்திரிய
வேகம் புலன்களுக்கு மேவச் சுறுசுறுப்பு
வாகளிக்கும் மாந்தர்க்கு வாயு"

– சித்த மருத்துவாங்க சுருக்கம்

- **FUNCTIONS OF VALI :**

1. To stimulate the respiration
2. To activate the body, mind and the intellect.
3. To expel the fourteen different types of natural reflexes.
4. To activate seven physical constituents in functional co- ordination.
5. To strengthen the five sense organs.

In the above process Vatham plays a vital role to assist the body functions.

II. AZHAL (PITHAM):

- **NATURE OF AZHAL :**

The nature of Azhal is atomic. It is sharp and hot. The ghee becomes watery, salt crystallizes and jaggery melts because of heat. The heat of Azhal is responsible for many actions and their reactions.

- **SITES OF AZHAL:**

According to vaithiya sathagam, the pingalai, urinary bladder, stomach, stomach and heart are the places where Azhal sustains. In addition to the above places, the umbilicus, epigastria region, stomach, sweat, saliva, blood, essence of food, eyes and skin are also the places where Azhal sustains. Yugi muni says that the Azhal sustains in urine and the places below the neck.

- **PROPERTIES OF AZHAL:**

Azhal is responsible for the digestion, vision, maintenance, of the body temperature, hunger, thirst, taste etc. Its other functions include thought, knowledge, strength and softness.

- **FUNCTIONS OF AZHAL**

1. Maintenance of body temperature.
2. Produces reddish or yellowish colour of the body.
3. Produce heat energy on digestion of food.
4. Produces sweating.
5. Induces giddiness.
6. Produces blood and the excess blood are let out.
7. Gives yellowish coloration to the skin, eyes, faeces and urine
8. Produce anger, heat, burning sensation, inaction and determination.
9. Gives bitter or sour taste.

- **TYPES OF AZHAL**

1. **Aakkanal - Anala pitham or Pasaka pitham** -The fire of digestion. It lies between the stomach and the intestine and causes digestion and dries up the moist ingested substance.
2. **Vanna eri – Ranjaga pitham** - Blood promoting fire. The fire lies in the stomach and gives red colour to the chyme and produces blood. It improves blood.
3. **Aatralanki – Saathaga pitham** -The fire of energy. It gives energy to do the work.
4. **Nokku Azhal – Alosaga pitham** – The fire of Vision. It lies in the eyes and causes the faculty of vision. It helps to visualizethings.
5. **Ul oli thee – Prasaka pitham** – The fire of brightness. It gives colour, complexion and brightness to the skin.

III. IYYAM (KABAM):

- **NATURE OF IYYAM :**

Greasy, cool, dull, viscous, soft and compact are the nature of Iyyam.

- **SITES OF IYYAM :**

Head, tongue, eyes, nose, throat, thorax, bone, bone marrow, joints, blood, fat, sperm and colon are the seats of Iyyam. It also lies in the stomach, spleen, the pancreas, chyle and lymph.

- **PROPERTIES OF IYYAM :**

Stability, greasiness, formation of joints, the ability to with stand hunger, thirst, sorrow and distress are the qualities. It also helps to withstand sufferings.

- **FUNCTIONS OF IYYAM :**

Greasiness, strength, roughness, knowledge, cool, growth, heaviness of bone, restriction of joint movements, pallor, indigestion, deep sleep and to have a sweet taste in tongue are the function of Iyyam. The skin, eyes, faces and urine are white in colour due to the influence of Iyyam.

- **TYPES OF IYYAM :**

1. **Ali iyyam – Avalambagam** : Heart is the seat of Avalambagam. It controls all other types of Iyyam.

2. **Neerpi iyyam - Kilethagam:** Its location is stomach. It gives moisture & softness to the ingested food.
3. **Suvai kaan iyyam - Pothagam:** Its location is tongue. It is responsible for the sense of taste.
4. **Niraivu iyyam – Tharpagam:** It gives coolness to the vision.
5. **Ondri iyyam – Santhigam:** It gives lubrication to the bones particularly in the joints.

THE UDAL THATHUKKAL (PHYSICAL CONSTITUENTS):

Udal Thathukkal is the basic physical constituents of the body. They are also constituted by the Five Elements.

1. **Saaram:** This gives mental and physical perseverance.
2. **Senneer :** Imparts colour to the body and nourishes the body
3. **Oon:** It gives shape to the body according to the physical activity and covers the bones.
4. **Kozhuppu:** It lubricates the joints and other parts of the body to function smoothly.
5. **Enbu :** Supports the frame and responsible for the postures and movements of the body.
6. **Moolai:** It occupies the medulla of the bones and gives strength and softness to them.
7. **Sukkilam/ Suronitham:** It is responsible for reproduction. These are the seven basic constituents that form the Physical Body. The Bones are predominantly formed by the Earth component, but other elements are also present in it. All the three humours Vali, Azhal and Iyyam present in this 7 constituents.

The intake food converted to udal thaadhu in which the intake food is converted to saaram in the first day, and then it converted to chenkeer in the second day, oon, kozhuppu, enbu, moolai and sukkilam/ Suronitham respectively in the following days. So in the seventh day only the intake food goes to the sukkilam/suronitham.

UDAL THEE (FOUR KINDS OF BODY FIRE) :

There are four kinds of body fire. They are Samaakkini, Vishamaakkini, Deekshaakkini and Manthaakkini.

1. **SAMAAKKINI (BALANCED DIGESTIVE FIRE):** The digestive fire is called as Samaakkini. This is constituted by SamanaVayu, Anala Pitham and Kilethaga Kapham. If they are in normal proportion then it is called as Samakkini. It is responsible for the normal digestion of the food.
2. **VISHAMAAKKINI (TOXIC DIGESTION):** Due to deranged and displaced Samana Vayu, it takes a longer time for digestion of normal food. It is responsible for the indigestion due to slow digestion.
3. **DEEKSHAAKKINI (ACCENTUATED DIGESTION):** The samana vayu rounds up the Azhal, which leads to increased Anala Pitham, so food is digested faster.
4. **MANTHAAKKINI (SLUGGISH DIGESTION):** The samana vayu rounds up the Iyyam, which leads to increased KilethagaKapham. Therefore food is poorly digested for a very longer period and leads to abdominal pain, distention heaviness of the body etc.

THINAI:

There are five thinai (The Land)

1. Kurinchi - Mountain
2. Mullai - Forest
3. Marudham - Agricultural land
4. Neidhal - The coastal area
5. Paalai – Desert

KAALAM:

Ancient Tamilians had divisions over the year into different seasons known as Perumpozhudhu and likewise in the day, it is known as Sirupozhudhu.

- **PERUMPOZHUDHU:**

The year is divided into six seasons. They are,

1. Kaarkalam
2. Koothir
3. Munpani
4. Pin pani
5. Ilavenil
6. Mudhuvenil

- **SIRUPOZHUDHU:**

The day has been divided into six yamams of four hours each. They are maalai (evening), Idaiyammam (Midnight), Vaikarai (Dawn), Kaalai (Morning), Nannpakal (Noon), Erpaddu (Afternoon). The each perumpozhuthu and sirupozhuthu is associated with the three humours naturally.

FOURTEEN NATURAL REFLEXES / URGES:

The natural reflexes excretory, protective and preventive mechanisms are responsible for the urges and instincts. They are 14 in number,

1. Vatham (Flatus)
2. Thummal (Sneezing)
3. Siruneer (Micturition)
4. Malam (Defecation)
5. Kottavi (Act of yawning)
6. Pasi (Sensation of hunger)
7. Neer vetkai (Sensation of thirst)
8. Erumal (Coughing)
9. Ellaipu (Fatigue)
10. Thookam (Sleep)
11. Vaanthi (Vomiting)
12. Kanneer (Tears)
13. Sukkilam (Semen)
14. Suvasam (Breathing)

These natural reflexes are said to be an indication of normal functioning of our body. A proper maintenance should be carried out and they should not be restrained with force.

THE ASTROLOGY:

MACROCOSM AND MICROCOSM:

Man is said to be microcosm, and the world is macrocosm; because what exist in the world exist in man. Man is an integral part of universal nature. The forces in the microcosm (man) are identical with the forces of the macrocosm (world). The natural forces acting in and through the various organs of the body are intimately related to the similar or corresponding forces acting in and through the organism of the world. This closely follows the Siddhars doctrine

"அண்டத்தி லுள்ளதே பிண்டம்
பிண்டத்தி லுள்ளதே அண்டம்
அண்டமும் பிண்டமு மொன்றே
அறிந்து தான் பார்க்கும் போது"
- சட்டமுனி ஞானம்

ASTRAL INFLUENCES

All influences that come from the sun, planets and stars act on human bodies. Moon exercises a very bad influence over the disease in general, especially during the period of new moon. Examples are paralysis, brain affections, dropsy, and stimulation of sexual passions. Mars causes women's suffering from want of blood and nervous strength. A conjugation of the moon with other planets such as Venus, mars, etc may make her influence still more injurious. The 8th place from the laghanam deals about ones age, chronic disease, death etc.

"சூரணாம் காலமிருத்தியோடு எட்டாம்
துறைலக்கினாதியும் கூடிடில்
பாரமாம் கல்லாகினும் இடியேனும்
பட்டு இறந்திடுவான் மற்றின்னம்
சேரவே அட்டமாத் நீசத்தில்

செறிந்து பன்னிரண்டு று எட்டில்
வீரமாம் கருங்கோள் நோக்கவே குன்ம
வியாதியாட் வியமடைந்திடுவன்"

- சோதிட அலங்காரம்

In the organisms of man, these forces may act in an abnormal manner and cause disease. Similarly in the great organism of the cosmos they may act abnormally likewise and bring about disease on earth and its atmospheric condition like earthquake, storms etc. The mars invisibly influence human's blood constituents. The Venus makes love between two persons of the opposite sex. The following are the instances in which every sign of the Zodiac has towards some particular parts of the body.

1. ACCORDING TO T.V.S DICTIONARY

1. Aries - To the neck
2. Taurus - Neck and shoulder
3. Gemini - Arms and hands
4. Cancer - Chest and adjacent parts.
5. Leo - The heart and stomach
6. Virgo - The intestine, base of stomach and umbilicus
7. Libra - Kidney
8. Scorpio - Genitals
9. Sagittarius - Lips
10. Capricorns - Knees
11. Aquarius - Legs
12. Pisces – Feet

2. ACCORDING TO LITERATURE THIRUVALLUVAR PERIYA SUNTHARA

SEKARAM:

1. Mesam - Head
2. Risabam - Face
3. Mithunam - Neck
4. Kadagam - Shoulder
5. Simmam - Chest
6. Kanni - Side of body
7. Thulam - Posterior trunk (muthugu), stomach
8. Virutchigam - Testis
9. Thanusu - Thigh (thudai)
10. Magaram - Knee
11. Kumbam - Calcaneum
12. Meenam – Foot

KUGARANA NILAI IN SIDDHA MEDICINE

This is the first medical system to emphasis health as the perfect state of physical, psychological, social and spiritual component of human being. The condition of the human body in which the dietary habits, daily activities and the environmental influence keep the three humors in equilibrium is considered as healthy living.

DISEASE

Disease is also known by other names viz sickness, distemper, suffering and ailment, distress of mind, chronic disease and dreadful illness.

CHARACTERISTICS FEATURE OF DISEASE

Diseases are of two kinds

1. Pertaining to the body
2. Pertaining to the mind according to the variation of the three humors.

CAUSES OF DISEASE

Excepting the disease caused by our previous births, the disease is normally caused by our food habits and actions. This has been rightly quoted in the following verses by Sage Thiruvalluvar,

**“ மிகினுங் குறையினும் நோய்செய்யும் நூலோர்
வளிமுதலா வெண்ணிய மூன்று”**

The food and actions of a person should be in harmony with the nature of his body. Any increase or decrease in a humor viz. Vatham, Pitham, Kabam leads to the derangement of the three humors. The acceptance of food means the taste and quality of the food eaten and a person's ability to digest. 'Actions' mean his good words, deeds or bad actions. According to Thiruvalluvar, the disease is caused due to the increase or decrease of three humors causing the upset of equilibrium.

So disease is a condition in which there is derangement in the five elements, which alters the three humors, reflected in turn in the seven physical constituents. The change could be an increase or decrease in the humors. This shows the following signs as per vitiation of the individual humor.

QUANTITATIVE CHANGES OF UYIR THATHUKKAL

Table : 1- QUANTITATIVE CHANGES OF UYIR THATHUKKAL

S.no.	HUMOUR	INCREASED	DECREASED
1	VALI (Vatham)	Wasting, blackish discoloration, affinity to hot foods, tremors, distended abdomen, constipation, weakness, insomnia, weakness in sense organs, giddiness and laziness.	Body pain, feeble voice, and diminished capability of the brain, decreased intellectual Quotient, syncope and increased kaba condition.
2	AZHA (Pitham)	Yellowish discoloration of conjunctiva, skin, urine and feces, polyphagia, polydypsia, dyspepsia, burning sensation all over the body and decreased sleep.	Loss of appetite, cold, pallor and features of increased kabam.
3	IYYAM (Kabam)	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnea, flatulence, cough and excessive sleep.	Giddiness, dryness of the joints and prominence of bones. Profuse sweating in the hair follicles and palpitation.

Udal Thathukkal

Table-2.Changes of Udal thathukkal.

UDAL THATHUKKAL	INCREASED	DECREASED
SAARAM	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnea, flatulence, cough and excessive Sleep.	Dryness of skin, tiredness, loss of weight, lassitude and Irritability while hearing louder sounds.
SENNEER	Boils in different parts of the body, splenomegaly, tumors, pricking pain, loss of appetite, haematuria, hypertension, reddish eye and skin, leprosy and jaundice.	Affinity to sour and cold food, nervous, debility, dryness and Pallor.
OON	Tubercular adenitis, venereal diseases, extra growth around neck, cheeks, abdomen, thigh and genitalia.	Lethargic sense organs, pain in joints, muscle wasting in mandibular region, gluteal region, penis and thighs.
KOZHUPPU	Identical feature of increased flesh, tiredness, dyspnea on exertion, extra musculature in gluteal region, external genitalia, chest, abdomen and thighs.	Loins pain, splenomegaly and emaciation.
ENBU	Excessive ossification and dentition	Joint pain, falling of teeth, falling and splitting of hairs and nails.
MOOLAI	Heaviness of the body and eyes, swollen Inter phalangeal joints, oliguria and non-healing ulcers.	Osteoporosis and Blurred vision.
SUKKILAM (OR) SURONITHAM	Increased sexual activity, urinary calculi	Dribbling of sukkilam / suronitham or senner during coitus, pricking pain in the testis and inflamed& contused external genitalia.

Table: 3- SUVAIGAL

TASTES	DISEASES DUE TO HIGH INTAKE
Inippu	Develops obesity, excessive fat, increased mucous secretion, indigestion, diabetes, cervical adenitis, increased kabam and its diseases
Pulippu	Develops nervous weakness, dull vision, giddiness, anemia, dropsy, dryness of tongue, acne, blisters etc.
Uppu	Ageing, hair loss, leprosy, dryness of tongue, debility
Kaippu	Increased dryness of tongue, defected Spermatogenesis, body weakness, dyspnoea lassitude, tremor, back and hip pain.
Kaarppu	Dryness of tongue, generalized malaise, tremor, back pain, lassitude etc.
Thubarppu	Abdominal discomfort, chest pain, tiredness, impotency, vascular constriction, constipation, dryness of tongue etc.

Table: 4- KAALAM

KAALAM (Season)	KUTTRAM	STATE OF KUTTRAM
1. Kaarkaalam (Rainy) Aavani – Puratasi (Aug 16 – Oct 15)	Vatham ↑↑ Pitham ↑ Kabam (--)	Ectopic escalation In situ escalation Restitution
2. KoothirKaalam (Post rainy) Iypasi –Karthigai (Oct 16 – Dec 15)	Vatham (--) Pitham ↑↑ Kabam (--)	Restitution Ectopic escalation Restitution
3. MunpaniKaalam (Winter) Markazhi – Thai (Dec 16 – Feb 15)	Vatham (--) Pitham (--) Kabam (--)	Restitution Restitution Restitution
4. PinpaniKaalam (Post winter) Masi – Panguni (Feb 16 –Apr 15)	Vatham (--) Pitham (--) Kabam ↑↑	Restitution Restitution In situ escalation
5. ElavenirKaalam (Summer) Chithirai – Vaikasi (Apr 16 – Jun 15)	Vatham (--) Pitham (--) Kabam ↑↑	Restitution Restitution Ectopic escalation
6. MudhuvenirKaalam (Post summer) Aani – Aadi (Jun 16 – Aug 15)	Vatham ↑ Kabam (--)	In situ escalation Restitution

Table: 5- THINAI

THINAI	LAND	HUMORS
1. Kurinchi	Mountain and its surroundings - Hilly terrain	Kabam
2. Mullai	Forest and its surroundings - Forest ranges	Pitham
3. Marutham	Farm land and its surroundings - Cultivable lands	All three humors are inEquilibrium
4. Neithal	Sea shore and its adjoining areas, Coastal belt	Vadham
5. Paalai	Desert and its surroundings Arid zone	All three humors are Affected

ALTERATION IN REFLEXES (14Vegangal)

There are 14 natural reflexes involved in the physiology of normal human being. If willfully restrained or suppressed, the following are resulted.

1. **Vatham (Flatus):** This urge should not be suppressed. If it is suppressed it leads to chest pain, epigastric pain. Abdominal pain, ache, constipation, dysuria and indigestion predominate.
2. **Thummal (Sneezing):** If restrained, it leads to headache, facial pain, low back pain and neurotic pain in the sense organs.
3. **Siruneer (Urine):** If restrained, it leads to urinary retention, urethral ulcer, joint pain, pain in the penis, gas formation in abdomen.
4. **Malam (Feces):** If restrained, it leads to pain in the knee joints, headache, general weakness, flatulence and other diseases may also originate.
5. **Kottavi (Yawning):** If restrained, it leads to indigestion, leucorrhoea, and abdominal disorders.
6. **Pasi (Hunger):** If restrained, it leads to the tiredness of all organs, emaciation, syncope, apathetic face and joint pain.
7. **Neervetkai (Thirst):** If restrained, it leads to the affection of all organs and pain may supervene.

8. **Kaasam (Cough):** If it is restrained, severe cough, bad breath and heart diseases will be resulted.
9. **Ilaippu (Exhaustiveness):** If restrained, it will lead to fainting, urinary disorders and rigor.
10. **Nithirai (Sleep):** All organs will get rest only during sleep. So it should not be avoided. Disturbance will lead to headache, pain in the eyes, deafness and slurred speech.
11. **Vaanthi (Vomiting):** If restrained, it leads to itching and symptoms of increased Pitham.
12. **Kanneer (Tears):** If it is restrained, it will lead to Sinusitis, headache, eye diseases and Chest pain.
13. **Sukkilam (Semen):** If it is restrained, there will be joint pain, difficulty in urination, fever and chest pain.
14. **Suvasam (Breathing):** If it is restrained, there will be cough, abdominal discomfort and Anorexia.

DIAGNOSTIC METHODOLOGY

The methodology of diagnosing disease in Siddha system shows uniqueness in its principle. The principle comprises of examination of Tongue, Complexion, Modulation in speech, inspection of eyes and findings by palpation. It also includes examination of Urine and Stool. The reinforcement of Diagnosis is based on Naadi (Pulse) examination. All these together constitute 'Envagaithervugal' which forms the basis of diagnostic methodology in Siddha system of Medicine.

These stools not only help in diagnosis but also to observe the prognosis of the disease and for reassuring the patient and to be informed about the nature of diseases. Besides these Envagaithervugal there are some other parameters in Siddha system which are greatly helpful in diagnosing various disease, they are Madikadai nool (Wrist circummetric sign) and Soditham (Astrology).

Envagai thervugal (Eight fold examination)

“நாடி பரிசம் நாநிறம் மொழிவிழி

மலம் மூத்திரம் மருத்துவராயுதம்”

“மெய்குறி நிறதொனி விழிநாவிருமலம் கைக்குறி”

-தேரையர்

The eight methods of diagnosis are Naadi (Pulse), Sparisam (Palpation), Naa (Tongue), Niram (Color), Mozhi (Voice), Vizhi (Eyes), Malam (Feces) and Neer (Urine).

NAADI (Examination of pulse)

The pulse Diagnosis is a unique method in Siddha Medicine. The pulse should be examined in the right hand for male and the left hand for female. The pulse can be recorded at the radial artery. By keenly observing the pulsation, the diagnosis of disease as well as its prognosis can be assessed clearly.

Naadi is nothing but the manifestation of the vital energy that sustains the life with in our body. Naadi plays an most important role in Envagaithervu and it has be considered as foremost thing in assessing the prognosis and diagnosis of various diseases. Any variation that occurs in the three humors is reflected in the Naadi. These

three humors organize, regularize and integrate basic functions of the human body. So, Naadi serves as good indicator of all ailments.

நாடி பார்க்கும் வகை

“இடுமென்ற நாடிகள்பார்க்கும் வகையைக்கேளு
என்னவென்றால் நடுவிரல் நீவிப்பின்னே
அடுமென்ற அடுத்தவிரல் மோதிரமாம் விரலை
அப்பனே இழுத்தபின்பு சுண்டுவிரலிழுத்து
உடுமென்றதூண்டுவிர லிழுத்து அப்பால்
உத்ததொரு அங்குட்ட விரலைநீ விக்கரத்தில்
படுமென்ற சீயோதி அங்குலமோ தள்ளி
பார்தவிட மூன்றுதரம் சுரம்பார்க்கும் வகையே
வகைஎன்ன வாதமது ஒண்ணரையாம் பித்தம்
வளமையொன்று அய்யங்கால் வளமாய்நிற்கில்
பகையில்லை நாடிகளுந் தொந்த மில்லை
பண்பான்சுகரொசருருபக் கூறுசொன்னேன்”

-அகத்தியர் கனக மணி 100

Naadi is felt by

Vali - Tip of index finger
Azhal - Tip of middle finger
Iyyam - Tip of ring finger

மூவகையும் மாத்திரை அளவும்

“வழங்கிய வாதம் மாத்திரை ஒன்றாகில்
வழங்கிய பித்தம் தன்னில் அரைவாசி
அழங்கும் கபந்தான் அடங்கியே காலோடில்
பிழங்கிய சீவர்க்குப் பிசுகொன்று மில்லையே”

-நோய் நாடல் முதல் பாகம்

The pulse is measured in wheat/grain expansile heights. The normal unit of pulse diagnosis is 1 for Vali (Vaadham), ½ for Azhal (Pitham) and ¼ for Iyyam (Kabam).

நாடிநடை

“வாகிலன்னங் கோழி மயிலென நடக்கும் வாதம்
ஏகிய வாமையட்டை யிவையென நடக்கும் பித்தம்
போகிய தவளை பாம்பு போலவாம் சேத்துமந்தான்”

-நோய்நாடல் முதல் பாகம்

Compared to the gait of various animals, reptiles and birds.

Vali - Movement of Swan and peacock

Azhal - Movement of Tortoise and Leech

Iyyam - Movement of Frog and Serpent

SPARISAM (Examination by touch)

நேயமுடனே வாதத்தின் தேசந்தானும்

நேர்மையாய்க் குளிர்ந்து சில விடத்திலே தான்

மாயமுடனு ட்டணமுந் துடிதுடிப்பு

மறுவுதலாம் பித்தத்தின் தேகந் தானும்

தோயவே வுட்டணமதாயிருக்குந் தெளிவாய்

சேத்துமத்தின் தேகமது குளிர்ந்திருக்கும்

பாய தொந்த தேகமது பலவாறாகும்

பரிந்து தொட்டுத் தேகத்தைப் பார்த்துப் பேசே

-கண்ணுசாமி பரம்பரை வைத்தியம்

In Vali disease, some regions of the body felt chill and in some areas they are hot.

In Azhal disease, we can feel heat.

In Iyya disease, chillness can be felt.

In Thontham diseases, we can feel altered sensations.

NAA (Examination of tounge)

பலமான ரூசியறியும் நாவின் கூற்றைப்
பகர்கின்றேன் வாதரோகி யின்றன் நாவு
கலமாக வெடித்து கறுத்திருக்கு மட்போல்
கண்டு கொள்வாய் பித்தரோகியின்றன் நாவு
நலமுற சிவந்து பச்சென்றிறுக்கும் நட்பிலா
சிலேத்துமரோகி யின்றன் நாவு
தலமதனிலுற்றமுதி யோர்கள் சொன்ன
தன்மையடி தடித்து வெளுத்திருக்கும்பாரே
-கண்ணுசாமி பரம்பரை வைத்தியம்

In Vali derangement, tongue will be cold, rough, furrowed and tastes pungent.

In Azhal, it will be red or yellow and bitter taste will be sensed.

In Iyyam, it is pale, sticky and sweet taste will be lingering.

In depletion of Thontham, tongue will be dark with raised papillae and dryness.

NIRAM (Examination of complexion)

மூன்றாகும் வாதபித்த சிலேத்து மத்தால்
மிகுந்தமுறத் தொந்தித்த ரோகி தேகம்
தோன்றாத சீதய வுஷ்ணங் காலமுன்றுந்
தொகுத்தேன்யான் திரேகத்தி னிறத்தைக் கேளு
ஊன்றாத வாதவுடல் கறுத்துக் காணும்
ஊரியபித்த முடல் சிவப்புப் பசுமைகாணும்
போன்றாத வையவுடல் வெண்மை தோன்றும்
பொருந்துந் தொந்த ரோகவுடற் கிவற்றையொக்கும்
-கண்ணுசாமி பரம்பரை வைத்தியம்

In Vali, Azhal and Iyyam variations, the colour of the body will be dark, yellow or red and fair respectively.

VIZHI (Examination of Eyes)

“உண்மையாய் கண்குறிப்பதைக் கேள் வாதம்

உற்றவிழி கறுத்துநொந்து நீறுங் காணும்

தண்மையிலாப் பித்தரோகி யின்றன் கண்கள்

சார்பாகப் பசுமைசிவப் பேறுங்காணும்

வண்மையிலா வையரோகி விழிகள் தானும்

வளமான வெண்மைநிற மேதா நாதம்

திண்மையிலாத் தொந்தரோகி யின்றன் கண்கள்

தீட்டுவாய் பலநிறமென் றறைய லாமே

-கண்ணுசாமி பரம்பரை வைத்தியம்

In Vali disease the tears are darkened.

In Azhal disease tears are yellow.

In Iyya disease tears are whitish in colour

In Thontha disease the tears are multi coloured.

In Vali disease there will be excessive tears (epiphora).

In disturbance of all three humors, eyes will be inflamed and reddish.

MOZHI (Examination of voice)

பார்ப்பதான் வாதரோகி யின்றன் வார்த்தை

பக்குவமாய்ச் சமசத்த மாயிருக்கும்

சேர்ப்பதுதான் பித்தரோகியின்றன் வார்த்தை

செப்பக்கோள பெலத்துமே யுறத்திருக்கும்

ஏற்பதுதான் ஐயரோகி யின்றன் வார்த்தை

யெளிதாகச் சிறுத்திருக்குமியல்பதாகும்

கேசற்கவே யிம்முன்றுந் தொந்தமாகில்

கூசாமற் பலவிதமாய் பேசுவாரே

-கண்ணுசாமி பரம்பரை வைத்தியம்

In variation of Vali, Azhal and Iyyam the voice will be medium, high and shrill / low pitched respectively. By the voice, the strength of the body can be assessed.

MALAM (Examination of feces)

ஒக்குமே வாத நோய் மலத்தைப் பார்க்கில்
உகந்த மலம் கறுகியே கறுத்திறுக்கும்
மிக்கபித்த நோய்மலத்தை யுற்று பார்க்கில்
மிகுந்த சிவப்புடன் பசுமை தானும் தோன்றும்
மைகுவளை மானேகே ளைய ரோகம்
மலமதுதான் வெண்மைனிற மாயிறுக்கும்
பக்குவமா யிம்முன்றுந் தொந்திப் பாகில்
பகருமின் நிறங்கள் வகை பரிந்து காணும்
- கண்ணுசாமி பரம்பரை வைத்தியம்

In excacerbatedVali, faces is hard, dry and black in colour.

In Azhal vitiation, it is yellow.

In Iyyam disturbances it is pale.

In Thondham, it is mixture of all colours.

MOOTHIRAM (Examination of urine)

ஒங்கிய வாதத்தோர்க்கு நீர்விழுங் குணந்தா நுரைக்கின்ற
பூங்கொடி கறுத்து நொந்து சிறுத்துடன் பொருமி வீழும்
பாங்குடன் பித்தததோர்க்கும் பசிய நீர் சிவந்து காட்டி
ஏங்கவே கறுக்கதாக எரித்துடன் கடுத்து வீழும்
வீழுமே சிலேற்பனத்தோர் நீர்க்குணம் விளம்பக் கேளாய்
நாளுமே வெளுத்துறைந்து நலம்பெற வீழுங்க ண்டாய்
வாள்விழி மானேதொந்த ரோகமானிடர்க்குந் தானே
தாளுநீர் பலநிறந்தா னெனவே சாற்றி னோமே
-கண்ணுசாமி பரம்பரை வைத்தியம்

In Vali disease the urine is darkened.

In Azhal disease it is reddish in colour.

In Iyya disease it is whitish in colour.

In Thontha disease it is multi coloured.

தேரர் நீர்குறி, நெய்குறி

“அருந்துமாரிரதமும் அவிரோதமதாய்

அஃகல் அலர்தல் அகாலவூன் தவிர்ந்தழற்

குற்றளவருந்தி உறங்கி வைகறை

ஆடிக்கலசத் தாவியே காது பெய்

தொருமுகூர்த்தக் கலைக்குட்படு நீரின்

நிறக்குறி நெய்க்குறி நிறுமித்தல் கடனே”

- தேரையர்

Theraiyar, one of the renowned authors of Siddha medicine described urine examination and stages of health. He had explained about the colour and consistency of the urine in vitiated humor and disease (Neerkuri). He also emphasized the spreading nature of a single drop of oil on the surface of the urine indicating the imbalance of specific dosha and prognosis of disease (Neikkuri).

Neerkuri

“வந்த நீர்க்கரி எடை மணம் நுரை எஞ்சலென்

றைந்தியலுளவவை யறைகுது முறையே”

Five characters of urine has to be examined. Those are colour, consistency, odour, foam and deposits.

Colour of the urine:

Normal urine is straw colored and odourless. The time of the day and food taken will have an impact on the colour of the urine.

Colour of the urine in diseased condition

Yellow colour (Similar to straw soaked water)	- Indigestion
Lemon colour	- Good digestion
Reddish yellow	- Heat in body
Colour similar to flame of forest red or flame coloured	- Excessive heat
Colour of saffron	- Extreme heat

Neikkuri

அரவென நீண்டினஃ கேவாதம்

ஆழிபோல் பரவின் அஃதே பித்தம்

முத்தொத்து நிற்கின் மொழிவதன் கபமே

-தேரன் நீர்குறி நெய்குறி

The spreading pattern of oil drop is the indicative of Vali, Azhal and Iyyam diseases.

Aravu (Snake Pattern of spread) indicates Vali disease,

Aazhi (Ring Pattern of spread) indicates Azhal disease.

Muthu (Pearl Pattern of spread) indicates Iyya disease.

In Neikkuri, the rapid spread of oil drop; Pearl beaded and Sieve type of spreading pattern indicates incurable state of the disease. From this, we can assess the prognosis by the Neikkuri.

Indications of spreading pattern of oil

Lengthening	- Vali
Splits	- Azhal
Sieve	- Iyyam
Stands as a drop	- Poor prognosis
Slowly spreads	- Good prognosis
Drop immerses into Urine	- Incurable disease

MANIKKADAI NOOL (Wrist circumetric sign)

According to the PathinenSiddharNaadinool, Manikadainool is also helpful in diagnosis. This manikkadainool is a parameter to diagnose the disease by measuring the circumference of the wrist by means of a thread and then expressing it in terms of patient's finger breadths. By this measurement the disease can be diagnosed.

Manikadainool inference

(Ref: Agathiyarsoodamanikayarusootheram)

When the Manikkadainool is 11 fbs, the person will be stout and he will live a healthy life for many years. When the Manikkadainool measures between 4 & 6, it indicates poor prognosis of disease and the severity of the illness will be high and it leads to death.

Measurement Possible conditions

- 10 fbs - Pricking pain in chest and limbs, gastritis and ulcer result.
- 9 $\frac{3}{4}$ fbs - Fissure, dryness and cough will be resulted.
- 9 $\frac{1}{2}$ fbs - Odema, increased body heat, burning sensation of eye, fever, Megaloblastemia & Anorexia.
- 9 $\frac{1}{4}$ fbs - Dysuria, Insomnia, Sinusitis and Burning sensation of Eye.
- 9 fbs - Impaired hearing, pain around waist, thigh pain, unable to walk.
- 8 $\frac{3}{4}$ fbs - Increased body heat, skin disease due to toxins, abdominal discomfort, cataract, sinusitis.
- 8 $\frac{1}{2}$ fbs - Leucorrhoea, venereal disorder and Infertility will occur.
- 8 $\frac{1}{4}$ fbs - Stout and painful body. Headache, Sinusitis and toxins induced Cough.
- 8 fbs- Abdominal discomfort, gastritis, anorexia & venereal diseases.
- 7 $\frac{3}{4}$ fbs- Piles, burning sensation of limbs, headache, numbness occur. Within 2 years cervical adenitis and epistaxis results.
- 7 $\frac{1}{2}$ fbs - Osteoporosis, abdominal discomfort, burning sensation of eyes, increased body temperature. Within 6 days all the joints of the limbs presents a swelling.
- 7 $\frac{1}{4}$ fbs- Lumbar pain, increased pitta in head, anemia, eye pain, odema and somnolence
- 7 fbs- Pitta ascends to head, haemetemesis, phlegm, burning sensation of limbs and constipation.
- 6 $\frac{3}{4}$ fbs -Eye ache, dizziness, testis disorder. Within 3 years it causes anuria, pain and burning sensation over limbs, facial sweating results.
- 6 $\frac{1}{2}$ fbs- Thirst, anorexia, increased body heat and vatham results.
- 6 $\frac{1}{4}$ fbs -Diarrhea, belching, vomiting and mucous dysentery

- 6 fbs- Reduced weight, phlegm in chest. It results in death within 20 days.
- 5 $\frac{3}{4}$ fbs- Delirium, dizziness, loss of consciousness. It results in death even if the patient takes gruel diet
- 5 $\frac{1}{2}$ fbs- Severity of illness is increased. Toxins spread to the head. Teeth darkens. Patient will die in 10 days.
- 5 $\frac{1}{4}$ fbs- Patient seems to be sleepy and death results on the next day.

5 fbs- Pallor and dryness of the body. Kabam engorges the throat and the person will die.

4 $\frac{3}{4}$ fbs- Dryness of tongue and tremor present. Patient will die in 7 days.

4 $\frac{1}{2}$ fbs - Shrunken eyes, odema will present and death results in 9 days.

4 $\frac{1}{4}$ fbs - Tremor, weakness of limbs and darkening of face occurs. Finally death results in two days.

4 fbs- Pedal odema will be present. Patient will die in 5 days.

REVIEW OF LITERATURE- NAADI

A. THE PHILOSOPHY OF NAADI.

NAADI (Examination of pulse)

DEFINITION:

“Naadi Parisodhanai” is a unique diagnostic method in Siddha system of Medicine. Naadi is nothing but the manifestation of the vital energy that sustains the life with in our body. Naadi is the most important diagnostic tool in Envagaithervu and it has been considered as the foremost thing in assessing the diagnosis and prognosis of various diseases. Any variation, which occurs in the three humors is reflected in the Naadi. These three humors organize, regularize and integrate basic functions of the human body. So, Naadi serves as good indicator of all ailments.

"நாடி என்றால் நாடியல்ல நரம்பில் தானே,
நலமாகத் துடிக்கின்ற துடிதானு மல்ல,
நாடி என்றால் வாதபித்த சிலேற்பனமு மல்ல,
நாடி எழுபத் தீராயிரந் தானு மல்ல
நாடி என்றால் அண்டரெண்டமெல்லாம்
நாடி எழுவகைத் தோற்றுத்துள்ளாய்நின்ற
நாடியது யாராய்ந்து பார்த்தா ரானால்
நாடியுறும் பொருள் தெரிந்து நாடுவாரே",

- Sadhaga Naadi.

This poem states that, Naadi is not just the waves caused by the hemodynamics in the blood vessels; Naadi is not only Vatham, Pitham and Kapham; Naadi is not only the total number of 72000 blood vessels; Naadi means an elaborate science that expands as it were throughout the world, cosmos with the seven kinds of transmigration. If one goes to search for it he can understand correctly what Naadi is.

Naadi means Thathu. It is three fold as Vatham, Pitham and Kapham. It indicates the pulse perceived in triple differentiation over the blood vessels. The word Naadi indicates to include all the ten Naadi components. Thathu means Aadhi or Moolam. The word Thathu means Aadhi (Primitive) or (origin). the word Thathu will indicate both Thathu governing the soul and the body.

The phenomenon which causes the soul to sustain in the physical body is called Naadi or Thathu. The Naadi is called in several terms as Seevasakthi, Seevathathu,

Thathu, Naadi, Seevan, Aanma, Seevaathama, Aathma Naadi, Aathmasakthi, and Guru Naadi.

The Life which dwells in the body is called Guru Naadi. The Seevasakthi divides into three and get 3 gunas and guards the soul as well as the body in an inseparable manner. The three are Vali, Azhal, Iyyam combined with 3 gunas and they perform three kinds of functions in the body namely Creation, Protection and Destruction. These three divisions are represented by Vayu, Theyu and Appu and three gunas are Sathuvam, Rajasam and Thamasam.

SEEVASAKTHI DOES THREE FUNCTIONS:

"குறியாய் வலக்கரங் குவிந்த பெருவிரல்,
வறியா யதன்கீழ் வைத்திடு மூவிரல்
பிரிவாய் மேலறிப் பெலத்தது வாதமாம்
அறிவாய் நடுவிர லமர்ந்ததது பித்தமே"
"பித்தத்தின் கீழே புரண்ட தையமாம்,
உற்றுற்றுப் பார்க்கவோர் நரம்பே யோடிடும்
பத்தித்த மூவரும் பாய்கின்ற வேகத்தால்
மத்தித்த நாளம்போல் வழங்கும் நரம்பிதே"

-Thirumoolar naadi

The Radial artery over the radius bone exhibits the pulse. Index, Middle and ring fingers have to be placed over the radial artery one inch near the wrist where the pulse will be felt. The ratio of the expansile amplitude of Vali, Azhal and Iyyam are 1:1/2:1/4 which is what the Siddhars have devised. If this ratio is maintained, both the body and mind will be healthy. The fingers are the tools for measuring the pulse.

Above said concept has been explained clearly in the couplet of Agasthiyar Naadi as follows:

"கரிமுக னடியை வாழ்த்திக் கைதனில் நாடிபார்க்கில்
பெருவிரலங்குலத்தில் பிடித்தடி நடுவே தொட்டால்
ஒருவிர லோடில்வாத முயர்நடு விரலிற் பித்தம்
திருவிரல் மூன்றிலோடில் சேத்துமநாடி தானே".

-Agasthiyar Naadi

After bowing to the Almighty, if you feel the pulse on the hand one inch below the thumb through the three fingers, the first finger indicates Vatham; the middle finger indicates Pitham and the third finger indicates Kapham.

On the wrist, one inch below the thumb, place three fingers namely the index finger, middle finger and the ring finger; the pulse can be recorded one inch below the wrist laterally over the radial artery. The pulse felt by the index finger indicates Vatham; the pulse felt by the middle finger indicates Pitham; and the pulse felt by the ring finger indicates Kabam or Slethumam. The three fingers should be pressed and released frequently and simultaneously during pulse reading to feel the exact condition of the Naadi. Thus the different pulses are felt differentially in the same vessel.

The flow of blood in the vessel creates waves in the blood stream. The soul or the life factor indicates the nature of the body through the pulse in three different maathirai.

Naadi is felt by

Vali	-	Tip of index finger
Azhal	-	Tip of middle finger
Iyyam	-	Tip of ring finger

THE MEASURE OF THE NAADI

"வழங்கிய வாதம் மாத்திரையொன் றாகில்
தழங்கிய பித்தந்தன் னிலரை வாசி
அழங்குங் கபந்தா னடங்கியே காலோடில்
பிறங்கிய சீவர்க்குப் பிசுகொன்று மில்லை

-Gunavagada Naadi

If the maathirai or measure of the Vatha Naadi is one; Pitha Naadi is half of Vatham, and the Kapha Naadi is quarter of Vatha, there is no disease to occur in human beings.

The measure of Vali, Azhal and Iyyam are 1:1/2:1/4 according to the Siddhars. The measure of Vatham is one; the measure of Pitham is half; the measure of Kapham is quarter. So, for a healthy person, the Naadi of Vatham will be one, Pitham will be half and Kapham will be quarter.

MAATHIRAI-DEFINITION

The one maathirai indicates the measure of one full wheat grain measure of pulse amplitude as per Kannusamiyam text and some authors feel that one maathirai is defined as the time taken for one second. But according to the Siddha literature, maathirai is the time taken by the pulse to swell and shrink to the size of a full wheat grain.

EXAMINATION OF NAADI

"பார்க்கவே கைபிடித்துநாடி தன்னைப்
பகர்ந்திடவே நெட்டையது வாங்கிப் பின்னுஞ்
சேர்க்கவே மணிக்கட்டு மேல தாகச்
சிறப்புடனே நாடிதன்னை விரலாற் காண
தீர்க்கவே யழுந்திப்பின் தளர்த்தி யேதான்
திறமுடமே விரல்களையு மாறி மாறி,
ஆக்கவே நாடிதனைப் பார்ப்பா யானால்
அப்பனே நாடிநடை தெரியும்தானே".

-Vaidya sara sangiragam

For Naadi Parisothanai, both the physician and the patient should be seated in comfortable place

As regards methodology, first the elbow of patient should be lightly flexed to the left and wrist slightly bent to the left with the fingers extended and patient 's left hand is held gently with the physician' s left hand and the pulse is felt with right hand index , middle and ring fingers keeping in 1 inch close opposition over the radial bone near wrist

The physician should examine by applying and releasing pressure alternately over Naadi, so as to assess the condition of the three humors without ambiguity.

When the physician wants to feel the pulse of the patient's left hand, he should use his right hand. While feeling the pulse, the index finger feels Vatham, the middle finger Pitham and the ring finger Kabam.

When Vatham increases unduly, vatha diseases will be manifested, and the Pitham and Kabam correspondingly. Moreover, the pulse felt by the thumb and the little finger is called the Bootha Naadi. The pulse felt by all the five fingers is called collectively Pancha Naadi or Pancha bootha Naadi.

The art and skill of pulse reading could be acquired and mastered by constant observation in patients, as pulse reading is considered more important in diagnosis.

GENESIS OF NAADI

1. "இருப்பான நாடி எழுபதோ டீரா
யிரா மான தேகத்தில் ஏலப் -பெருநாடி
ஒக்கத சமத் தொழிலை யூக்கதச வாயுக்கள்
தக்கபடி யென்றே சாரும்".
2. சாருந்தச நாடிதன்னில் மூலம் மூன்று
பேருமிடம் பிங்கலையும் பின்னலுடன் மாறும்
உரைக்கவிரற் காற்றொட் டுணர்த்துமே நாசி
வரைச்சுழியோ மையத்தில்வந்து ".
3. "வந்தகலை மூன்றில் வாயுவா மபானனுடன்
தந்த பிராணன் சமானனும் - சந்தமுறக்
கூட்டுறவுரேசித்தல் உறும்வாதம் பித்தம்
நாட்டுங் கபமேயாம் நாடு".
4. நாடு மிடகலை நானான்கு யங்குலமாய்
ஓடுமே பிங்கலையு முய்யபத்- தோடிரண்டு
போக நடுச் சுழியோ போற்றவு பாயமுமாய்ப்
பாகம் பகிர்ந்திடுமே பார்".

-Kannusamiyam

There are totally 72,000 Naadis in the body. Among them, Ten naadis called Peru Naadi are important. They are otherwise called Dhasa Naadi. Among the ten Naadis, the three namely Idakalai, Pingalai and Suzhimunai are important in stimulating other ones. These three Naadis are stimulated by the three vayus namely apanan, pranan and samanana, the principle vatham is created by the interaction of idakalai with Apana vayu. So also by the Pingalai with prana vayu, the principle of pitham is created. By the reaction of Suzhimunai by the vayu samanana, the principle of kapham is created.

The Idakalai starts from the left nostril and extends upto 16 inches. The Pinkalai starts from the right nostril and the exhalation extends upto 12 inches. The Suzhimunai is in between the above two. This is the reason why the measure of

Vatham is one mathirai, the measure of pitham is half, and the measure of kapham is one quarter.

THE IMPORTANT PLACES WHERE NAADI CAN BE FELT

The pulse is manifested in all the 72,000 vessels. But ten places are mentioned as prominent sites to feel the pulse (Naadi). They are

- (1) Hands
- (2) Neck
- (3) Genital organs
- (4) Medial side of the ankles
- (5) Above the level of the big toe of the foot, etc.

Among this BrahmaMunisays that the pulse felt in the hands are best.

According to Thirumoolar, the pulse may be felt on the following 10 places.

1. Inner side of Kuthikkal (Ankle)
2. Genitals
3. Umbilicus
4. Chest
5. Ears
6. Nose
7. Neck
8. Hands
9. Eye brows
10. Centre of the scalp.

But all Siddhars says that pulse on the hands is the best to feel.

The above pulse sites are mentioned in the following stanzas.

"கூர்ந்திடவே கன்னமது கழியிற் றானும்
குறிப்பான கைகளிலும் மர்மஸ்தானந் தன்னில்
சார்ந்திடவே கணுக்காலி னுட்பு றத்தில்
சார்வாகப் பெருவிரற்கால் மேல தாக
தேர்ந்திடவே நாடிதனை யுபயோ கிக்கத்
தெளிவாக மாந்தருக்குச் செப்ப லாச்சு
பேர்ந்திடவே சகலுக்குங் கரத்தி னாடி
பேசினார் பிரமமுனி பேசி னாரே"

"தாதுமுறைகேள் தனித் தகுதிச் சந்தோடு
ஒதுறு காமிய முந்திநெடு மார்பு
காது நெடுமூக்குக் கண்டம் கரம்புருவம்
போதுறு முச்சிபுகழ் பத்தும் பார்த்திடே".

- Thirumoolar

"பேர்ந்திடவே சகலருக்குங் கரத்தி னாடி
பேசினார் பிரமமுனி பேசினாரே".

"அறியவுந்தி வாதமடு பித்தந் தானும்
அறியுநடு மார்பில் வன்மை - குறிக்குமே
ஐயமுய ருச்சியண்டு நிலையாங் குணரப்
பையக் கரம்பற்றிப் பார்",

- Kannusamiyam

The pulse felt below the thumb on the wrist is easily palpable. The radial artery lies superficially in the wrist. Hence, it is easily palpable against the radial bone. So, with three fingers, one inch below the thumb and wrist on the hand, the three Naadi namely Vali, Azhal and Iyyam are palpable.

THE SEAT OF VATHAM, PITHAM AND KAPHAM ACCORDING TO VAIDYA SARASANGRAHAM

"செப்பு முந்தி சிதையும் வாதநிலை
ஒப்பு மார்பு முதையும் பித்தநிலை
கப்புமுச்சி கழறு மையநிலை
மெய்ப்பு மாமுனி மீண்டு முரைத்ததே".

- From the Anus to umbilicus - Vatham seated.
- From the umbilicus upto the chest -Pitham seated.
- From the chest to the scalp-Kapham seated.

NAADI NADAI:

"வாகினிலன்னங்கோழி மயிலென நடக்கும் வாதம்
ஏகிய வாமையட்டை யிவையென நடக்கும் பித்தம்
போகிய தவளைபாம்பு போலவாம் சேத்துமந்தான்
ஆகிய நாடி மூன்றும் மர்ந்திடிற் சன்னியாமே",

"ஆகிய வாதநாடி யன்னம்போற் குயிலைப்போலும்
 ஏகியபித்தநாடி எழிலாமை யட்டை போலும்
 போகிய சிலேஷ்ம் நாடிபொல்லாத தவளை பாம்புபோலும்
 பாகுடன் முனிவர்தாமும் பாடினார் நாடிதானே"

Compared to the gait of various animals, reptiles and birds.

Vali - Gait of Swan and peacock
 Azhal - Gait of Tortoise and Leech
 Iyyam - Gait of Frog and Serpent

The Siddhars have compared the movement of time of gaits of living beings with that of the pulses. The gaits of peacock, swan, hen, chameleon, nightingale and stork or crane are likened to Vatha pulse.

Table: 6- Naadi Nadai in Male and Female:

Naadi	Male	Female
Vatham	Mayil,annam,kozhi	Sarppam
Pitham	Aamai,attai	Mandookam
Kapham	Thavalai	Annam

NAADI - RIGHT SIDE FOR MALES AND LEFT SIDE FOR FEMALES:

"கேளப்பா புருடருக்கு வலது கையைக்
 கிருபையுடன் தான்பிடித்து நெட்டை வாங்கி,
 குளப்பா பெருவிரலோ ரங்குலத்துப் பார்க்க
 சுகமாக மூவிரலா லழுத்திப் பார்க்க
 வாளப்பா முதல்விரலே வாத நாடி
 வன்மையுடன் நடுவிரலே பித்த நாடி
 கேளப்பா அணிவிரலே சேத்தும நாடி
 திறமாக நின்னறி வாற்றெளிந்து காணே",

"பார்க்கவே பெண்டுகளுக் கிடது பக்கம்"

-Paripoorna nadi

For all persons, the pulse can be studied in both hands. But for males, pulse should be felt on the right side; for females felt on the left side and for eunuchs hermaphrodites on either one side.

In the literature it is said that the navel region points upwards for females and downwards for males. For this reason, it is considered that the pulse in male and female should be read as said in the previous paragraphs (III Volume-Anuboga Vaidya Parama Ragasiyam)

"வேனென்ற பத்துமொன்றாய் மனதுங் கூடி
மேவியவன் கலந்துவந்து விழுகும் போது
மானென்ற மௌனபர வசமே யாவான்
மருவுகின்ற பெண்ணுக்கு முறைதான் கேளே"
-Pindorpathi

"முறையான பெண்ணானும் மௌன முற்றால்
மோசமில்லை கருவங்கே தரிக்கும் பாரு
நிறையான வலத்தோடில் ஆணையாகும்
நேராக இடத்தோடில் பெண்ணே யாகும்
உறையான கருப்பையில் சுக்கிலமாய்ப் பாய
உத்தமனே சுரோணிதந்தா னுறைந்து கொள்ளும்"

During coitus, the eleven principles namely Gnanendriyam, Kanmendriyam and the mind should be united. At that time, when the breathing operates through the right nostril, the child born will be male. If the breathing conducts through the left nostril, the child born would be female. If it passes through the nostrils common on Suzhimunai, the child will be a eunuch or hermaphrodite. Accordingly, the organs of the child will also be formed differently. Hence, it is substantiated that the right and left side pulse thereof might be different.

AN IMPORTANT NOTE BEFORE PULSE READING

- The season
- The country or the place
- The age of the patient and
- The physique of the patient.

The state of Vatham, Pitham and Kabam should be noticed. The states of the Naadis are

1. 1.Thannadai (Natural state)
2. 2.Puranadai(Vitiation)
3. 3.Kuthithal(Jumping)
4. Kilaithal(Ramification)
5. Kathithal (Rising)
6. Thullal (Leaping)
7. 7.Azhunthal (To become hard)
8. 8.Paduthal (Lying posture)
9. 9.Kalaththal (Agitating)
10. 10.Munnokku (Tending forward)
11. 11.Pinnokku (Tending backward)
12. 12.Pakkanokkal(Tending side ward)
13. Suzhalal (Swinging around).

The above positions of Naadi should be learnt from a learned Guru and by experience. The Sasthras on Naadi should be studied well and the differences of single Naadi and mixed Naadi should be ascertained. Experience should be gained in this aspect, otherwise it will be difficult to read the pulses properly.

The definition of different vitiations of Vatham, Pitham and Ayyam

1. If Vatha Naadi is doubled, that is the Maathirai is 2 in number, it is called vatham in vatham, vatha mikuthi, vatham kathithal, vatham meeri nadaththal etc.
2. If Pitha Naadi is in double its maathirai, it is called Pitha mikuthi, Pitham kathithal, Pitham meeri nadanthal, Pitham in Pitham.
3. If Iyya Naadi is in double its maathirai, it is called Iyyam mikuthi, Iyyam Kathithal, Iyyam meeri nadanthal and Iyyam in Iyyam.

The definition of Thontha Naadi and the proportion of maathirai in Thontha Naadi

1. Vatha Pitha Thontham : (Mixing of Vali and Azhal) : If the Vatha Naadi is in two maathirai and Pitha Naadi is more than its normal and upto double i.e. (1/2-1) the pulse is called Vatha Pitha thontham.
2. Vatha Iyya Thontham: Vatha Naadi will be in two maathirai and Iyya Naadi will be more than its normal and upto double i.e. (1/4-1/2). It is called Vatha Iyya thontham.
3. Pitha Vatha Thontham: Pitha Naadi will be in one maathiri and Vatham will be more than its normal upto double i.e. (1-2). It is called Pitha Vatha thontham.
4. Pitha Iyya Thontham: Pitha Nadi will be in double its maathirai and Iyya Naadi will be more than its normal and upto ½ maathirai. (i.e.1/4-1/2) and this is called Pitha Iyya thontham
5. Iyya Vatha Thontham:
Iyya Naadi will be in ½ maathirai and Vatha Naadi will be more than one maathirai but below 2. This condition is called Iyya Vatha thontham.
6. Iyya Pitha Thantham: Iyya Naadi will be in ½ Maathirai. as where Pitha Naadi will be more than half maathirai but within one maathirai. This Naadi is called Iyya Pitha thontham.

"தானென்ற வாதமாத் திரைதா னிரண்டு
தப்பாது பித்தமது தானொன் றேறில்,
வேனென்ற வாத பித்தந் தொந்திப் பாகும்
மிகுவாத மிரண்டுஞ்சிலேத் துமமொன்றாகில்
ஊனென்ற வாதமையந் தொந்திப் பாகும்
உற்றபித்த மிரட்டித்துரைவாத மொன்று சேரில்
கோனென்ற பித்தமுடன் வாதஞ் சேர்த்துக
கொண்டதிந்தரோக மெனக்கூறே".

"கூறுவேன் பித்தமாத் திரையிரண் டாகில்
கொடியசிலேற் பனமொன் றுதிக்கு மாகில்,
துாறுவேன் பித்தசிலேத் துமந்தா னென்றும்,
துலங்குசிலேத் துமமிரண்டு வா மொன்றுந்

தேறுவேன் சிலேத்தும வாதந்தா னென்றும்
சிலேத்தும மிரட்டித்தப் பித்தமொன்று சேரில்
வேறு நீ நினையாதே சிலேத்தும பித்தம்"

The above stanzas explain several Thontha naadi. A physician should learn and be trained in them by experience. If pitham and Vatham elevate to the level of two maathirai each and Vatham in its natural positions of one maathirai it is not considered as Thontha naadi. The first naadi in double its maathirai and the other Naadi in more than its natural maathirai but below its double elevations should be taken into account. To diagnose diseases by pulse and then administering medicines is better.

"முப்பிணி மருவி முனிவுகொள் குறிப்பை
தப்பா தறியுந் தன்மையும் வாத
பித்தவையப் பிரிவையுமவைதாம்
ஏறி யிறங்கி இணைந்துக் கலந்து
மாறி மாறி வருஞ் செயற்கையாற் பிணி
நேர்மை யறிந்து நீட்டு மருந்தே
சீரியதா மெனச் செப்புவர் சித்தரே".

The natural state of the three Naadis, their increase or decrease, their union or separation etc., should be observed minutely before commencing the treatment.

The means of estimating the beats of Naadi

"நாடி மூன்றையும் நாடிடுங்காலை
நடுவிரல் நாடியே நாடியே கணிப்பான்
நற்றவக்குருவென நவிலு மறையே".

When estimating the beats of Naadi, by the three fingers, the Naadi felt by the middle finger should be estimated first and then the other two Naadis may be compared with the beats of Pitha naadi.

The means of slackening the disease

"மூன்றி லொன்றுயர்ந்ததை முன்னரறிந்து
முந்தியதனை யொழித்திடு மருந்திடு
தணியும் நோயின் தந்திர மதுவே
பேணிக் கணித்திடின் பிறவாய் பின்குணம்".

As per the above stanza while feeling the beating of pulse (Naadi), the one Naadi which is higher than the other two should be studied and immediate treatment should be given to quench the severity of symptoms. This will help to avoid complications. It is absolutely necessary to diagnose properly and administer medicines.

"மதித்திடற் கருமை வாய்ந்த
மாண்பரி கார மெல்லாம்
துதித்திட வுணர்ந்தா னேனந்
துகளறப்பிணியின் றன்மை
பதித்திட வுணரா னாகிற்
பயனுறானாக லானே
விதித்திடு பிணித்தி றத்தை
விளம்புது முதற்கண் மன்னோ"

- Chikitcha Rathna Deepam

Though a physician is having so many potential medicines with him, it will be futile if the physician is not able to diagnose a disease with the aid of symptoms, Naadi and Envagai thervu .

B) DESCRIPTION OF NAADI

According to the seasons, when all the three Naadis are in their natural state, no disease would occur and when deviated, diseases will occur.

The three Naadis namely Vali, Azhal, Iyyam are compared with Brahma, Vishnu, and Rudran (Siva) since these Naadis are having the power of Creation (Akkal), Protection (Kaathal) and Destruction (Azhithal).

The state of prominence of the three Naadis on each day

"தினகர னுதயஞ் சேரும் வாதம்
எனவாம் நண்பகல் இயலும் பித்தம்
அந்தி வரின யடையவது ஐயம்
பிந்திரவின் முதற் பேசும் வாதம்
இப்படி நாடி பப்பத் தாங்கடி
கைப்படி செல்லுமென் றறிவீர் பிடகரே".

"காலையில் வாதகாடி கடிகையில் பத்தாகும்
பாலையில் பித்தநாடி பகருச்சி பத்தாகும்
மாலையாம் சேத்துமநாடி மதிப்புடன் பத்தாகும்
வாலையா மனோன்மணிக்கு வகுத்துமேதொகுத்ததாமே".
-Vaidyasaranga sangirakam

During day time, for in 12hrs Vatham will be prominent for four hours from sunrise. Pitham will be prominent during the next four hours. Kapham will be prominent during the last four hours. The same ratio continues from the sunset upto the next morning.(i.e) Vatham – 6 a.m to 10a.m.; Pitham-10 a.m. to 2 p.m.and Kabam – 2 p.m. to 6 p.m.

The Prominence and effect of the three Naadis during the week

- If Vatham (Idakalai) attains prominence in the mornings during Monday, Wednesday, Friday and Thursday in Sukkila patcham (Waxing moon) the body and mind will be healthy.
- If Pitham (Pinkalai) attains prominence in the mornings during Sunday, Tuesday, Saturday and Thursday in Krishna Patcham (Waning moon) the body and mind will be healthy.
-

There is no textual reference regarding the prominence of Kabam Naaadi in the morning.

Chandran (Moon)	-	Lord of the body
Sooriyan (Sun)	-	Lord of the soul
Sasi (Chandran)	-	Moon
Pukar (Velli)	-	Venus
Punthi (Budhan)	-	Mercury
Guru (Viyazhan)	-	Jupiter
Chandra naadi	-	Vatha Naadi
Sooriya naadi	-	Pitha Naadi
Suzhimunai	-	Kabam Naadi
Iraivan (Arasan)	-	Vatha Naadi

When the three Naadis vitiate during the week days, the onset of diseases is explained
Vatha Naadi: When Vatha naadi is prominent during the morning of Sunday, cough, phlegm, dyspnea etc. will be manifested. If on Tuesday, fever will occur. During Saturday, Seethalam (Coldness) and Sanni (Delirium) will occur. If it is during the Thursday of Krishna patcham (waning moon) pain throughout the body will be manifested.

Pitha Naadi: If this Naadi is prominent in the morning of Monday, Salathodam (common cold) will occur. During Wednesday, head ache and Neeretrham (Catarrh) will occur. During Friday, eye diseases and ear diseases will occur. If during Thursday of Sukkila Patcham (waxing moon) , head ache and fever will occur.

Kabam Naadi: There is no evidence of Kaba Naadi in morning. The time when the Naadis are prominent during the month (Pathartha Guna Cintamani Naadi)

- The months during which Vatham will be prominent are from Aadi to Aippasi (i.e. July 15th to November 15th).
- The months during which Pitham will be prominent are from Panguni to Aani (i.e. March 15th to July 15th)
- The months during which Ayyam will be in its natural state are from Kaarthigai to Maasi (i.e. November 15th to March 15th)

Arasan	-	Vatham
Mandhiri	-	Pitham
Senapathi	-	Kapham

- During which months and at what time, pulse reading will be perfect (Agasthiyar Naadi)
- During the months of Chithirai and Vaikasi at the time of sun rise. (i.e. April 15th to June 15th)
- During the months of Aani, Aadi, Aippasi and Kaarthigai at midday. (i.e. June 15th to August 15th and October 15th November 15th)
- During the months of Maarkazhi. Thai and Maasi at sunset. (i.e. November 15th to March 15th)
- During the months of Panguni, Aavani and Purattasi at night (i.e. March 15th to April 15th and August 15th to October 15th). If pulses are in the said months at the said time, the reading will be perfect.

When the pulse will not be felt perfectly

For the following persons Naadi (Pulse) will not be felt accurately (Sathaga Naadi)

- For the following persons Naadi will not be felt accurately: For persons immediately after copulation ; persons suffering from diseases for long time ; persons who have returned from riding on horse or elephant ; persons who have walked for long distance ; persons immediately after taking too much food ; persons who consume alcohol ; persons suffering from polyuria,diabetes mellitus, leprosy etc.; persons who have become weak due to general anasarca and fever affecting the bones; persons who are afraid of something; having anxiety ; with poisonous bites; after a long run.
- Pregnant ladies ; during menstrual periods, while suffering from menorrhagia; persons having too much sorrow; persons immediately after taking oil bath; persons with anger ; within ungovernable lust; old and weak people; reckless and arrogant persons and obese persons.
- Persons affected from fracture; anaemic persons; persons who have touched corpse; persons who have vomited and who are having hiccup; persons who are fasting ; persons who have become wet due to rain; persons after singing for a long time; persons who have become tired after fencing or dancing ; persons during control of breath; pulse will be rapid for the above persons, Hence , the reading of pulse will not be perfect,
- Persons body has become distressed due to their wandering in sun, when taking very hot food at the time of excess hunger, taking alcoholic drinks, chewing tobacco in the hot sun, persons having continuous fever, those who don't sleep well in nights; persons with mental perplexity; very weak persons; persons having blood loss; the above persons the pulse will be rapid and hence cannot be diagnosed perfectly.

THE TIME AT WHICH THE PULSE BECOMES WEAK, PULSE CANNOT BE READ PROPERLY

- At the time of excess hunger, a person having mental distress; at the time when there is coldness; after a long sleep. In the above conditions, the pulse will be feeble, hence it cannot be properly felt.

FOR THE FOLLOWING PERSONS NAADI WILL NOT BE FELT ACCURATELY

- Very old people, children; tuberculosis patients, poor people, persons after copulation, persons submerged in water, the above persons, the beating of pulse will not be clear.
- When fixing the hands firmly on the floor, when tying the hands on the legs, when there is any ligature above the place where we palpate the Naadi. In the above conditions, the beating of Naadi (Pulse) will be improper.
- During taking oil bath, when in wet clothes, during eating, when having hunger, at the time of copulation and during walking the pulse beating will be confusing.

THASA NAADI-TEN NAADIS

1. **Idakalai:** A rises from the right big toe of the leg, crossing scissor like i.e. coiling round the suzhimunai and enters in the left nostril.
2. **Pingalai:** A rises from the left big toe of the leg, crossing scissor like i.e. coiling round the suzhimunai and enters in the right nostril.
3. **Suzhimunai:** Acts on both the nostrils from the Moolatharam as a 8 pedalstal for the naadi and flow to the head.
4. **Siguval:** it dwell in the uvula and guides food and liquid to be swallowed.
5. **Purudan:** it dwells in right eye.
6. **Kanthari:** it dwells in left eye
7. **Aththi:** it dwells in right ear
8. **Alampudai:** it dwells in left ear.
9. **Sangini:** it dwells in external genitalia.
10. **Gugu:** it dwells in anus.

C) NAADI INDICATING THE SIGNS OF DEATH AND INCURABILITY

NAADI INDICATING INCURABLENESS

- Death is sure when Kapha Naadi independently doubles with the reduction or disappearance of Vatham and Pitham.
- It is futile to treat a patient when his Vatha and Pitha pulse have disappeared.
- It is futile to treat a patient when his Pitha Naadi have disappeared; when Kapha Naadi only is prominent, it is also futile. If Vatha naadi raises, treatment will be useful.
- If Kapha Naadi of the patient increases and mingles with Pitha naadi, the patient will die within a day. After the disappearance of Pitha Naadi, Kapha naadi mingles with Vaatha Naadi, the patient will die within 24 minutes (1Nabhikai)
- If the Naadi is found agitated and precipitated on the thighs, the waist and below the chest, it is a sign of nearing death; when if anyone of the three Naadis palpated and if the patient is having excess of thirst, dryness of tongue, loss of luster in the eyes etc., the prognosis will be bad.
- If the Naadis are agitated and disordered with tremors, dryness of tongue, eyes staring up constantly, dyspnoea and phlegm in the throat, the prognosis will be bad.
- If the three Naadis are combined and felt as one simultaneously disappears or Naadi is felt like the fluttering of the cut tail of the streaked lizard, the signs show the nearing of death.
- If the levator (nerve of the hind part of the neck) is chill, if the five sense organs are weary, gnashing of teeth, dryness of tongue, having tremors, respiration becoming feeble, staring of eyes and if the Naadi is mingle and flutter like a locust it indicates sign of death.
- If Kapha Naadi runs like a lood independently, death will be on next day, if Pithanaadi divert and pass independently, death will be in third day; if Vaathanaadi divert and pass independently death will be in eight days.

- If the Vatha, Pitha Kapha Naadis vibrate simultaneously like scorpion sting death will be in a month.
- If all the three Naadis mingle together s a whirling beetle on water, if they spin like a top, like a locust if they turn and fall death is sure.
- If Vatham and Pitham mingle and pass and divert, death will be in 15 days. All the three Vatham, Pitham, and Kapham Naadis divert and pass; death will take place within 40 days.

NAADI INDICATING INCURABLENESS:

1. Death is sure when the following conditions prevail

- When palpating the pulse, if all the three pulses sink
- If all the three pulses completely diminish, or
- If all the three pulses are rapid simultaneously
- If all the three pulses are slipping from their natural occur state and run downwards.

2. If the pulses beat irregularly as follows, death will occur within four or five days.

- If Kapha naadi is prominent in the morning
- If Pitha naadi is prominent in the noon and
- If Vatha Naadi is prominent in the evening

3. If Kapha Naadi is prominent continuously in the morning, death is sure.

4. If all the three pulses are crawling like ants; death will be occur after a month.

5. If all the three pulses beat like the wings of (sempothu) concal, the patient will die within ten months.

6. If Kapha Naadi stands upright like a horse, death will take place within a month.

7. If Kapha Naadi is shivering and agitated like peacock and leech, death is sure within seven days.

8. If Pitham is shrinking and Vatham and Kapha are coupled along with the symptoms like emaciation of the body, paleness, coldness of the extremities, throbbing of the chest during respiration, dripping of tears from the eye and water from the nose, dryness of tongue, blackening of the teeth and vomitting, death is sure.

9. If Pitham and Vatham vanish and Kapham becomes relaxed with hiccup, vomiting, chest block, dyspnoea, perspiration nasal block, breathing through the mouth, dryness of tongue and closing of the eyes death is sure.

VIPPURUTHI/PUTTRU (CANCER)

Tridosha is the physiological base around which the Siddha system of medicine revolves. Three basic functions operating through a constant interplay between the environment and the individual are thought to be required to maintain the integrity of a living system.

Vippuruthi means Cancer or Carcinoma- It is a malignant tumour characterized by the formation of a net work of connective tissue contacting the epithelial cells. It tends to grow progressively to eat into the parts surrounding it to affect the constitution and ultimately produce death. (T.V. Sambasivam pillai, 1998)

In benign Neoplasm one or two of the three bodily systems are out of control and is not too harmful to the body as the body could overcome this condition. Malignant Tumours (Vippuruthi, Putru) (Sambasivam pillai, 1998) are very harmful because all the three major humours loose mutual coordination and thus cannot prevent tissue proliferation resulting in deadly morbid condition.

Here, Siddha literature deals with various types of malignancies, mentioned by Siddhars. Sage Yugi, used the term Vippuruthi and Dhunmangism in his text Yugi vaidhya chinthamani (Yugi vaithya chinthamani, 1998) which can be correlated with cancer. Some of other interesting texts like Agathiyar rana vaithyam, Nagamuni nayanavithi, Agathiyar nayanavithi deals with cancer as Putru (Naaku putru, Sevi putru, Vaai putru) which are cancer of tongue, ear and mouth (Utthamarayan, 2005). Siddha literature is based on the three humours of subtle energy such as Vatham (Wind), Pitham (Fire) and Kapham (Water) which mutually coordinate to perform the normal functions of the body. Yugi vaidhya chinthamani, a book on Siddha pathology addresses in detail about the Vippuruthi roga nidhanam (Diagnosis of the disease) according to which seven types are established on functional disorders and organ involvement. Based on the functional disorders, they are classified as

- Vadha vippuruthi,
- Pitha vippuruthi, and
- Kapha vippuruthi.

Based on the organs involved, they are classified as

- Kuvalai(Lung) vippuruthi,
- Karpa(Uterine) vippuruthi
- Santhu (Bone and joints) vippuruthi,
- Oodu(Metastatic) vippuruthi.

The etiological factors for Vippuruthi are excessive intake of salty and spicy food, excessive intake of meat, excessive intake of minerals, frequent sexual intercourse and sexual contact with elderly women.

According to another text Anubava vaithya dheva raghasiyam, there are 10 major areas which are prone to Vippuruthi. They are

- Nabi (Umbilicus),
- Vasthi (Bladder),
- Kalleeral (Liver),
- Manneeral (Spleen)
- Kanaiyam (Pancreas),
- Iraipai (Stomach),
- Abanam (Anorectal),
- Karuppai (Uterus),
- Thodai iduku (Groin),
- Moothira kiranthi (Prostate gland)

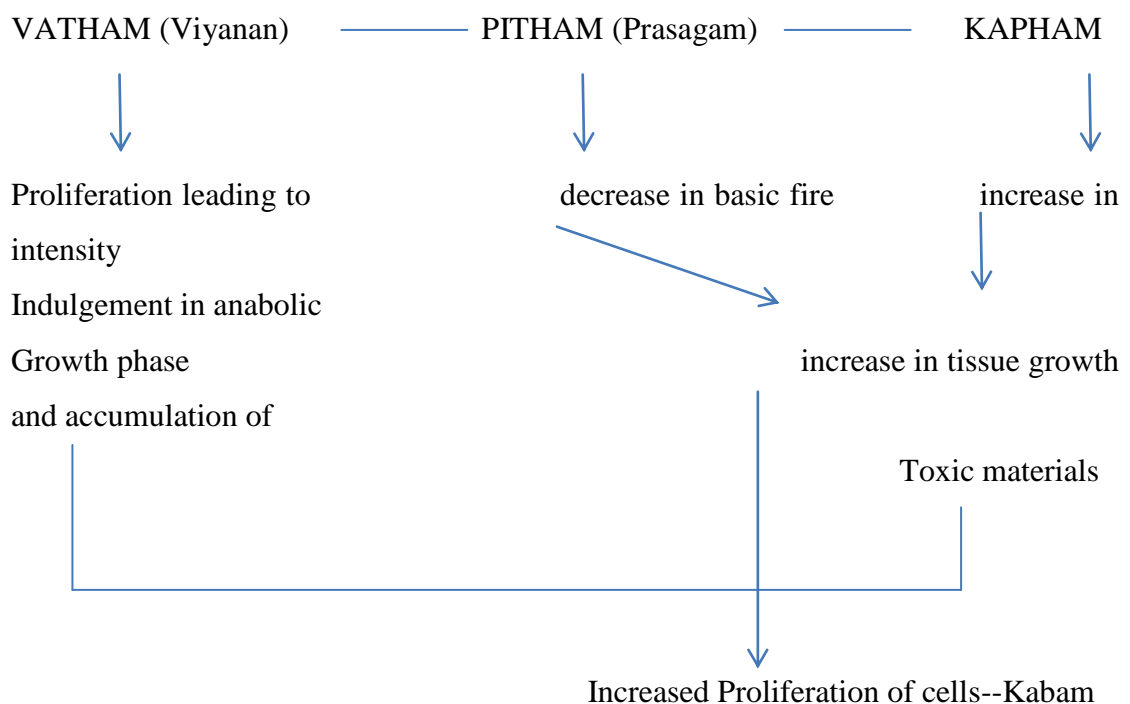
(Seetharam Prasath,1997).

Noi Guna Iyal (Pathophysiology)

Pitham which is responsible for digestion and various metabolic functions is present in each and every cell. In cancer, there is a decrease in agni (fire) which is inversely proportional to Kapham (\downarrow agni = \uparrow Kapha) resulting in excessive tissue growth. Vatham can be related to the anabolic growth phase. Kapham can be related to the accumulation of toxic matter [Noi Naadal –page 117]. In cancer, the metabolic crisis develops with decrease in agni followed by counter increase in Vatham and Kapham forces, both interacting with each other resulting in proliferation.

- Normally any abnormal swelling is due to increased Kapham.
- Spread of any disease is the feature of Vatham, more particularly viyanan.
- But the initial reason for the neo growth is always Pitham, the fire.

- Our digestion, assimilation are all based on the Prasaka pitham.
- The abnormality of Pitham occurs due to exposure to toxins in food, certain chemical substances taken as medicine or repeated exposure to environmental toxins.
- The increased Pitham at the cellular level can cause micro inflammatory, which disturb the cellular components.
- Due to this cells the primary unit of the structure of the body-the seven physical constituents produces poorly formed abnormal tissues which proliferate due to Kapham and cause tumor.
- Vatham is the active dosham and is involved in the process of metastasis.
- Kapham being heavy and gross is responsible for the abnormal growth of the cells creating the malignant tumor.



Process of metastasis –vatham is active dosham

Figure 1 : NOI GUNA IYAL

SEVEN PHYSICAL CONSTITUENTS

- The abnormal pitham subsequently influences the metabolic activity further, leading to enlargement and spread of tumor affected cell.
- The manifestation of the type of cancer depend upon the physical constituent affected –blood or muscle or bone or the interval organs or reproductive organs
- Therefore it can clearly be stated that, cancer is a tridosha disorder which has the capacity to spread due to the interplay of abnormal vatham, pitham and kapham.
- As the disease progress, the whole body feels absolutely devitalized, exhausted and unable to cope with day to day functioning.
- As kapham progress the digestive fire gets suppressed and loss of appetite and distaste sets in leading to progressive weight loss.

The role of three humours in Cancer clinical symptoms

Humours

Cancer Symptoms

1 Increased Vatham Wasting, Constipation or diarrhoea, Insomnia and Pain
2 Decreased Pitham Loss of appetite, Indigestion, Pallor, Chills and Rigor
3 Increased Kapham Indigestion, Lethargic, Fatigue, Pallor and heaviness of the body.

NAADI PRESENTATION IN VIPPURATHI

A. COMMON SYMPTOMS DURING AMALGAMATION OF NAADIS

1.SYMPTOMS DURING BLENDING OF KABAM AND VATHAM

"கண்டாயோ சிலேற்பனத்தில் வாதநாடி
கலந்திடுகில் வயிறு பொருமல் கனத்த வீக்கம்
உண்டாலோ ஒங்காரஞ் சத்தி விக்கல்
உறுதிரட்சை வாய்வுவலி சந்தி தோடம்
விண்டாலே இளைப்பிருமல் சோபை பாண்டு
விடபாகம் விடகுலை பக்க வாதம்
திண்டாடு நாசிகா பீடங் கக்கல்
சிரநோய்கள் பலவும் வந்து சிக்குந் தானே"

- Sathaga Naadi

As per the above Sathaga Naadi, we understand that due to the coupling of Kapham and Vatham, the following symptoms will be seen.

1. flatulence 2.swelling 3.vomiting 4.hiccup, 5.accumulation of gas, 6. Delirium with Vatha symptoms, 7.toxicity 8.tuberculosis, 9.dropsy, 10.anaemia, 11.toxic swelling, 12. Pricking pain, 13.hemiplegia, 14.nasal block, 15.polyphagia,16. Polydipsia, 17. Pain in the nerves, 18. pain in the occipital region.

Kapham should be double in its nature and Vatham should be higher, but below its double

2. .SYMPTOMS DURING THE BLENDING OF KABAM AND PITHAM

"இடமான சேத்துமத்தில் பித்தநாடி
எழுந்தணுகில் விடமுடனே வீக்க முண்டாம்,
திடமான குளிர்காய்ச்சல் மஞ்சள் நோவுத்
தேகத்தி லுளைச்சலிளைப் பிருமல் வாந்தி
விடமான நெஞ்சடைப்பு சுவாசம் விக்கல்
வெகுசுரமும் நாவறட்சி பாண்டு ரோகம்
அடமான குவளை ரத்த மதிசா ரந்தான்
அணுகிவெகு பல நோயக்குத் தடங்கண்டாயே"

-Sathaga Naadi

The above Tamil stanzas explain that the following symptoms will be seen during the coupling of Kapaham and Pitham.

- | | |
|---------------------------|----------------------------------|
| 1.Toxic swelling | 14. Hemoptysis |
| 2.fever with rigor | 15.diarrhoea |
| 3.pain in the body | 16. Delirium |
| 4. jaundice | 17.pain in the hand |
| 5. tuberculosis | 18. Loss of hearing |
| 6. cough | 19.Sweet taste in the tongue |
| 7. vomiting | 20. Indigestion |
| 8. heaviness in the chest | 21. Bitter taste in the any food |
| 9. asthma | 22. Difference tastes at times |
| 10. hiccup | 23. Stammering in speech |
| 11.high fever | 24. Phlegm in the throat |
| 12.dryness of tongue | |
| 13.anaemia | |

Kapham should be double its nature and Pitham should be above its natural state and below its double.

3. THE SYMPTOMS DURING BLENDING OF KAPHAM AND PITHAM.

"கதிப்பான சேத்துமத்தி லுட்டிணங் கூடில்
கலந்தகுணஞ் சயமிருமல் சுவாச காசம்
மதிப்பான கோழைரத்தம் விப்புருதி யுடனே
வளர்நாசி காபீடமிருத் ரோகங்
கொதிப்பான சிங்ஙுவையாக் கிராண வாயு
கொட்டாவி விக்கல் மந் தார காசம்
துதிப்பான வீரலத்திக் காய்வு ரத்தம்
தோன்றுமிகு மிகு பிணிபலவுந் தொந்திப் பாமே".

-Sathaga Naadi

According to the above, the following symptoms will be seen.

1. Symptoms of tuberculosis, 2. Cough, 3. cough with dyspnoea, 4. Expectoration, 5. haemoptysis, 6. abscess or Cancer, 7. nasal block, 8. Heart diseases, 9. diseases of the

tongue, 10. Aakkirana Vayu, 11.yawning, 12. Hiccup, 13.cough during cold season, 14. Liver diseases, 15.fever affecting bones, 16. Heamorrhage.

4. THE SYMPTOMS DURING BLENDING OF PITHAM AND KABAM

"பண்பான பித்தத்தில் சேத்தும நாடி
பரிசித்தா லத்திகர மிளைப்பு ஈளை
கண் காது நயனமலம் நீரு மஞ்சள்
கனவயிறு பொருமல் மஞ்சள்நோய் கண்ணோவு
உண்போது மறுத்தல்இரத்தவிப்புருதி தானும்
உளைமாந்தை பீனசமும் இரத்த வீக்கம்
நண்பான காமாலை சோகை வெப்பு
நனுகிவந்த பலபிணியும் நண்ணுந் தானே"

- Sathaga Naadi

As per the above stanza, we understand, that due to the coupling of pitham and Ayyam the following symptoms will be seen.

- | | |
|------------------------------|--|
| 1. fever affecting the bones | 2. dyspnoea |
| 3. phlegm | 4. yellowish discolouration rheum in the eyes, wax of the ears |
| 5. flatulence | 6. jaundice |
| 7. eye diseases | 8. dislike for food |
| 9. abscess or Blood Cancer | 10. tubercular affection |
| 11. sinusitis | 12. swelling |
| 13. dropsy | 14. heat |
| 15. loss of appetite | 16. Vomiting with bile |
| 17. incoherent speech | 18. excess saliva |
| 19. affection of the stomach | 20. pain in the back neck. |

The pitha naadi will be double in its normal state and Ayyam above its normal state but below its double.

B. DOUBLE LAYERED PULSE

AS PER THE CHINESE HERB ACADEMY ARTICLES-THE DN HAN VIEW OF CANCER.

A cancer pulse is usually double lined, but it can also be Concealed, Knotted, Chocking, Substitutional or Intermittent. When it is double lined, usually the very top it will be knotted. Anytime a pulse is mixing with another one it will create a knotted sensation at the fingertips. When the cancer completely takes over, the whole pulse will become doubled and will take like two distinct layers. If the pulse is just knotting, then it means that something is blocking and growing, but if it actively doubling, and then it is creating a malignant activity.

Sometimes called as binding pulse, it is an indication of excessive yin. Any two waves waving into a rope shape or tangling with each other always indicate cancerous energy. If this model is seen in the mid level of a pulse, the organ has cancer; if in the superficial level, cancer is starting to form in the organ; if in the deep level, and cancer is moving on (metastasis)

Cancer diagnosis through pulse perception is possible only when the cancer is active while in remission or quiescent, there will not be any cancer activity; although when the cancer is inactive, it can still be a source of stress to the involved organ. It should also be noted that when cancer is inactive or in remission, the cancer pulse shapes –knotting and intermediate-do not manifest. The practitioner should compare the other pulse positions and shapes to determine energetic balance and movement.

As per the text secrets of pulses, Guru naadi is explained thus,

Guru means master, teacher, an enlightened being. At the time of initiation, the guru looks into the initiate's third eye making certain gestures called mudra and the thumb gives sakthi, energy transmission and awakens the guru Naadi. When the Guru Naadi starts pulsating, Prakruthi and Vikuruthi become balanced. This balanced state of being opens the sushumna, the central pathway in the spine, creating a state of transformation. Blessed are those whose guru naadi is awakened. It is a spiritual phenomenon that has to be received from a guru. When the Guru Naadi is at work, the awakening of the kundalini sakthi takes place. Guru Naadi is the basis of universal polarity, the balancing of opposite principles within the individual.

When the Guru Naadi is awakened, one can feel one's own pulse and through that pulse, while looking into the third eye of another person, can feel what is happening with that other person. The art of emptiness is the art of awareness and the Guru Naadi takes expression through this timeless state.



Figure no. 2

Method of Detecting Guru Naadi Investigator Feeling For Double Line Guru Naadi.

Guru naadi is spoken of so highly in Siddha system by a number of Siddhars in their respective treatises. Guru Naadi is said to be the master of all the other Naadis and that it over rules the organism as a whole and that it cannot be understood without a proper Guru and long year of experience and hence it is probably called as guru Naadi.

This Naadi is considered to stimulate and sustain help the other Naadi. This Naadi is said to be pivotal of the five Naadi. Only those who are perfectly trained in Naadi parisothanai will be able to feel the Pancha naadi

The definition of Guru Naadi

Guru Naadi will indicate the life force or the soul itself. There are so many schools of thought regarding this *Naadi*. This are,

1. *Guru Naadi* will be found in front of *Pitha Naadi*.
2. It is strong enough to control *Dhasa Naadis*.
3. It pervades throughout the body in all the systems including brain. It mingles with three *Naadis* namely *Vatham*, *Pitham* and *Kapham*. It crosses like a scissors and controls the three *Naadi (humours)* (*Idakalai*, *Pingalai* and *Suzhimunai*).

We can understand that *Guru Naadi* is the root cause for the three *Naadi* namely *Vatham*, *Pitham* and *Kapham*. It is nothing but the soul itself.

"சொல்லுகின்ற வாதபித்த சேத்துதந்தன்னில்

சுகமான பித்தமது பூதநாடி

வெல்லுகின்ற குருநாடி ஆதம நாடி

· வெகுநோயை யகற்றிநலங் காட்டும் நாடி,

பல்லுயிர்க்குந் தானாக யிருந்த நாடி

பலகோடி யண்டமெல்லாம் நிறைந்த நாடி

அல்லலுறு மாங்காரம் பிராண நாடி

அக்கினியைச் சேர்ந்தெழுந்த நாடி தானே".

- Sadhaga Naadi

As per the above stanza, we understand that *Pitha Naadi* itself is considered as *Bootha Naadi*, *Guru Naadi*, *Athma Naadi* etc. It is the base for *Akankaram*, *Pranan* and *Uyir akkini*. It is capable of allaying all the diseases.

Guru Naadi will always be found in front of *Pitha Naadi*. But some authors say *Guru Naadi* is different from *Pitha Naadi*.

According to *Siddha* literature, *Guru Naadi* is the cause for other *Naadis* and it controls all the *Naadis*. Some authors consider that *Guru Naadi* is a separate entity, since it controls and gives strength to the other *Naadis*. But it is very difficult to feel the *Guru Naadi* alone when all the *Naadis* are present.

"குருநாடி எப்போதும் பித்தத்தின் முன்னே
குறிப்பாக நிற்குமது பாரு பாரு
தருநாடி தசநாடி திறமாய் நிற்கும் பாரு
தாக்குமுடல் உயிராக நிற்கும் பாரு
திரிநாடி வாதபித்த மையம்நடுவிற் பற்றி
தீவிரமாய் மூன்றுவிரல் தாண்டிப் பாயும்
வருநாடி விசநரம்பி னூடே சேர்ந்து
வளர்சந்திர மண்டலம் போய்ச் சாரும் பாரே".

- Vaidhya sara sangirakam

"பாரேதான் பம்பரம்போற் கிறுகி றுத்துப்
பகர்வாத பித்தமைய மென்ற நாடி
சேரவே மண்டலங்கள் மூன்றுஞ் சுற்றிச்
செழித்தகத்திரிக் கோன்மாற லெனவே சேர்ந்து
வாரேதான் வாதபித்த மையம்நடு விருந்து
வாதத்தில் கோழி அன்னம் மயில்போ லாகும்
கூரேதான் பித்தத்தில் ஆமை யட்டைக்
குறிப்பாகச் சேத்துமத்தில் பாம்புபோற் றவளையாமே".

-Vaidhya sara sangirakam

"பாரப்பா குருநாடி ஐந்துக்கு நடுவில்
பாரிநிற்கும் வரலாறு தன்னைக் கேளு
சீரப்பா பித்ததின் முன்னே நிற்கும்
தசநாடி பத்துக்கும் திறமாய் நிற்கும்
ஏரப்பா வாதமென்றுஞ் சொல்லுவர் மூடர்
இருத்தியங்கே பார்ப்பளவில் வேறாய் நிற்கும்
தாரப்பா கண்டகுரு நாடி நேர்மை
தனையறிய வகையுனக்குச் சாற்று வேனே".

-Pathartha guru chinthamani naadi

"சாற்றுவேன் பெருவிரலிற் பூதநாடி
சங்கையில்லா ஆள்தூண்டி வாத மென்க
ஏற்றமுள்ள நடுவிரல்தான் பித்தநாடி
இசைந்ததொரு பெளத்திரமே ஐய மாகும்
மாற்றுமே குருநாடி ஐந்துட் சேர்ந்து
வளர்ந்துநிற்கும் பேர்பெரிய உண்மைதானே".

"காரப்பா உடலுக்கு ஞாயிராய் நின்ற
கருவான குருநாடி ஒன்று காணே".

"ஒன்றுக்கு மெட்டாத நாடி நேர்மை
ஊடுருவித் தானிருக்கு முண்மை கேளீர்
வண்டுகள்தான் மதுவருந்தும் நேர்மை போல
வாதபித்த சேத்துமத்தின் மதுவை யுண்ணும்
என்றைக்கும் வாத பித்தமயம் நடுவே நிற்கும்
ஏறுவதுங் குறைவதுவு மில்லை யப்பா
கன்றுக்குப் பாலிறக்கும் பசுவைப் போல
காத்திருக்குங் குருநாடி காலைப் பாரே".

"குருநாடி நிலையறியாக் குருட ரெல்லாம்
கூட்டமிட்டுச் சாத்திரத்துக் குவமை சொல்வார்
மறுபடி வாதபித்த சேத்து மத்தின்
மத்திமமென் றிதையறியார் வார்த்தை சொல்வார்
கருநாடி குருநாடி யாகக் காணும்
கைமுறையாய்க் குருதொட்டுக் காட்டத் தோன்றும்

பெருநாடி சாத்திரத்தில் மயங்கி டாதே
 புலந்தியர்தம் குடிநாடி பின்னல் பாரே".
 "தம்பமுடன் வாதபித்த ஐயநடு விலேதான்
 தமரகம்போ லாடிநிற்கும் குருவி தாமே".
 "ஏற்றகுரு நாடிதன்னை யிசைந்து பார்க்கில்
 இடையும் பிங்கலையுமே யிசைந்து மாறி
 மாற்றமில்லாச் சுழிமுனையைத் தானே பற்றி,
 மாறிநிற்குங் கத்திரிக்கை மாறல் போலச்
 சீற்றமுடன் வாதபித்த திரிநாடி நிலையைப்பார்க்கில்
 கோமான்றன் திருக்கூற்றைக் கூறலாமே".

According to the above verses, Guru Naadi is said to be a separate entity. Guru Naadi mingles with all the Pancha Naadis and strengthens them. Its abode is the centre of the three Naadis. It also directs the three Naadis. It is the heart of other Naadis. Guru Naadi is formed by the combination of *Idakalai*, *Pingalai* and *Suzhimunai* and the *Abanan*, *Pranan* and *Samanan* respectively, it is the cause for breathing, humours Vatham, Pitham and Kapham. The power which can keep the body and soul in good condition is Guru Naadi.

Diseases in relation to the state of Guru Naadi

- If Guru Naadi unites with Vatham and rolls like a leech, the person is susceptible for Vayu , cough, itchy skin lesions etc.

N.B: Rolling like a leech means Vatha Naadi will be lesser in its maathirai.

- If Guru Naadi mingles with Pitha Naadi like Annam (Swan) fever, excess of saliva, perspiration, retention of urine and slackness of the extremities.

N.B: The beating of Pitham like Annam means Pitha Naadi will be in excess.

- If Guru Naadi mingles with Slethma Naadi like a lion charging with rage, the condition would be a state of collapse.

N.B: It means that Slethma Naadi will be in more than its normal range.

- If Guru Naadi penetrates into Slethma Naadi, it will create bad prognosis causing symptoms for death.

- If Guru Naadi totally diminishes, there will be diarrhoea, pain in abdomen and swelling of the extremities.
- If Guru Naadi passes sideways it will dash with Slethma Naadi which will cause the increase of Slethma Naadi.
- If Guru Naadi functions in its proper place, the three Naadis namely Vatham, Pitham and Kapham will be in their natural state.
- If Guru Naadi is not in its natural position complications will arise.
- If Guru Naadi flutters like locust in Kapha Naadi, death will ensure. We understand the above points from the three stanzas of Vaidhya Sara Sangraham and Siddhar Naadi Nool.

**FEATURES OF GURU NAADI- AS PER THE SIDDHA SYSTEM OF PULSE
READING BY DR.CHIDAMBARATHANU PILLAI
SEATS OF GURU NAADI**

It is the centre of pancha Naadi (five Naadis) and it will stand in front of Pitha Naadi. It will be prominent to Dasa Naadis and it is not the Vatha Naadai.

The Pancha naadis are

Thumb- Boothha naadi-Earth

Index finger- Vatha naadi- Air

Middle finger- Pitham- Fire

Ring finger-Selethmam - Water.

Small finger- Boothha naadi- Sky.

The Guru Naadi is in ceaseless activity and perforce manifests itself influencing at the same time, the three principal energies Vatha, Pitha and Kabam. These energies are in the perennial ebb and flow in the human system even as the waves of the sea and the tides are in ceaseless motions.

The Guru Naadi is always, as a matter of course in ceaseless vibration entering the principal high ways of the energies, spinal cord, the left and the right sympathetics and the three mandalas or regions, the agni, soorya and Chandra, in the human body. The sphere of its vibrations is not confined only to these regions but throughout the human frame from head to toe moving like the blades of scissors in action even as the sympathetic nerves are connected with the spinal cord. It has been noted that the Idagali and Pingalai and Suzhimunai all reach the sahasradala mandala

(the cerebrum) where from radiate the energy forces. This conception is confirming what was described as the synthetic notion of the Siddhas pertaining to the work in the human body. The vibrations of this Guru Naadi are compared to the motions of the swinging of the top and to the peculiar sound waves of the noise of the drum, known as Udakkai and references are ample to illustrate that the Naadi is all-pervading and even active.

The praise of this Naadi has been sung in various verses. It enables the being to make a conquest of all ills when in form. It is responsible for the prevention of numerous maladies and guides and directs the energy processes beneficently influencing the same. It is supposed to animate and vitalize the myriads of created beings .the essence of the same is partaking of the cosmos which is the cause of all life. It has been referred to as ‘Athma naadi’ and prana Naadi”. It takes its main driving force in concurrence with jeevagni. It may be safely concluded that agni bootha, known as jeevagni, is the king of all the boothas.

The measurement of this Naadi cannot but be made with reference to its work as seen in the waves of Vatham, Pitham and Kabam.

The Guru Naadi in its association with Vatham, in its association with Pitham and in its association with kabam presents itself in particular forms of vibrations which can be identified and traced for purposes of the study. Hence when we speak of vatham naadi, we mean the pulsation of the Guru Naadi is in tune with Vatham .when we speak with pitham Naadi we mean the natural and necessary vibrations in connection with Pitham similarly the kapham Naadi is indicating peculiar motions as conditioned by its association with the primary Naadi ,i.e. Guru Naadi. The pitham has another special function assigned to it.

It stands on a Pre-eminent footing its measurement is useful as indicating the general state of health in its relation to *Vatham* and *Kapham* and under the influence of *Guru Naadi*. Besides this, it has another function, since the Pitham energy affects even the thinking and emotional life of man. It drives its force by be friending the Jeevagni rising from *Mooladhara*. Agni is the *King of the Boothas* and the subtle effects of this energy are necessary for proper equilibrium of mind and sound emotional life. Abnormalities of *Pitham* are Sure indications of more than ordinary derangements very often in mental disease and the work of the Boothas can be judged by the State of *Pitham*. Sound *Pitham* means a emotional and intellectual life which is necessary for proper health. It being the result of the *King of Bathas* shows the

fundamental condition of bodily and mental health and special; reference has been made to it as the "*Bootha Naadi*". This differentiation of the Bootha Naadi revealed in Pitham, lays emphasis as between body and soul. *Pitham* is thus twice blessed.

All the Siddhas have laid due emphasis upon the necessity of understanding the Theory of Naadi Scientifically conceived, and he who is able to read and mark the movements of Guru Naadi as the Basic Vibration is really considered to be the right discover. These principles should always be borne in mind when we consider the question of the movements of Vatham, Pitham and Kapham as seen in the examination of Pulse.

In Siddhar's naadi sasthra it is told that this Guru Naadi stands as the main Naadi and even rules all the other Naadis and tri dosha. If one is able to understand the real practical technique of palpating this Guru Naadi there is no necessity to examine the Pulse with the three fingers and that an expert in Guru in Guru Naadi perceives by placing his index finger alone at the site of Vatham Can read the pulse and able to predict the conditions of tri dosha, it is clearly stated that there is no special Naadi called as Guru Naadi and that it is only the device and the special technique based on the hypothetical presumption derived from the deep study of the characters of pulse wove with the special tactile sensation and concentration of mind with which the status of Prananan and tridosham is understood. Hence profound practical knowledge occurred from a Guru, prolonged practice and experience in this field and the art of control over the sensitive organs and deep concentration of mind will only aid to understand this Guru Naadi. Thus This seems to be a complicated process in which the Pranana and Tridosham is involved and controlled by the nervous system and manifests its influence in the human body , through the blood (Jeeva Tadhu) which is circulating in the organism as a whole, from birth to death.

PLACE OF READING:

It is clearly stated that Guru Naadi does not possess any special characteristic movements of its own, and it only governs the others Naadi. The best place to examine the Guru Naadi is said to be the place of Vatham or between Vatham and Pitham and that it should be examined only with the Index finger by placing the tip of the index finger in three different angles, from up to down.

TECHNIQUE OF READING:

The special technique of tracing the Guru naadi is stated as follows:

The upper and first digital Part of the Index finger is divided into five regions, as upper, middle, lower, right and left regions. The upper and left region forms the top most part of the index finger forms the mid part to examine the Pitha Naadi and the lower and right region of the index finger, forming the lower part to examine the Kapha Naadi. Thus the index finger alone is placed over the radial artery at the site in which it usually placed, but in a special angle, and by slightly moving the finger tips in three different angles as said above in three stages, one is able to trace the condition of tri dosha, as it traced with three fingers, This Guru Naadi is to be traced only in the right wrist in both males and females alike.

READING OF GURU NAADI TO ASCERTAIN THE DISEASES:

- If Guru Naadi runs like centipede in Vatha, the patient will have gas trouble and pain and scratching sensation in the body. The body will become lean.
- If it appears like a tortoise in the Pitha more saliva will segregate fever could be felt profuse perspiration could be seen.
- If it is furious like a lion in silepanam delirium (Janni) would arise. The survival of the patient is difficult.
- If it is in the low ebb the body will turn dark in colour, Both hands and legs will be swollen. The patient cannot take food and die soon.
- If the Guru Naadi moves forcibly on sides silepanam will stand against it.
- Of the Guru Naadi stands aright there is no trouble in this condition, both Vatha and Pithanaadi would appear to be combined.
- If guru Naddi occupies the position behind, the condition of the patient would be serious.

Further it is stated that the Guru Naadi absorbs the tridosha as an insect absorbs the honey from the flowers and that it always remains in between Vatham and Pitham Hence some physicians consider that the Guru Naadi is to be felt in the interspaced between the places in which the Vatha Naadi and Pitha Naadi is usually felt by the index finger and middle finger respectively It is clear that there is no specific place on the course of the radial artery to palpate the Vatha Naadi or Pitha

Naddi and that is only the place where we place the index finger indicates the Vatha and the place of middle finger Indicates the Pitha and as such how it is to find out the interspaces between Vatha and Pitha on the course of the radial artery to palpate the Guru naadi. Hence it should be taken only as a special technique and as aforesaid the first digital part of the index finger is divided into these parts in a particular angle to examine the Vatha, Pitha and Kapha and that the place of junction of Vatha and Pitha regions specified on the index finger is to be placed on the radial artery to palpate the Guru Naadi. Thus with this special peculiar technique of examination of pulse over the radial artery by a particular part of the index finger with a single palpation the character of Guru Naadi is to be understood as it reveals the status of Vatha, Pitha and Kapha. The above is possible only by the Naadi movement minute technique used and understanding the intricate status of tri concentration of mind over it, Here by the character of single pulse wave of this Guru Naadi we have to assert the status of tri dasha. The ascent or raise of the pulse the descent or sloping down represents the force of Pitha and the pause of interval between the two waves denotes the force of Kapha. This only such a keen concentration of mind over the character of the Guru Naadi (pulse wave) will make one to understand the real merit of it. The Guru Naadi is a complicated phenomenon as it deals with the process of life of the organism as a whole.

NAADI PATTERN FOR OTHER DISEASES

Pulse pattern	–	Diseases
• Cock	-	Diabetic Albuminuria.
• Camel	-	Aortic stenosis, Rheumatic valvular heart disease.
• Elephant	-	Lymphatic obstruction, solid edema lymphosarcoma, elephantiasis.
• Mountain	-	Heart block, bundle branch block.
• Irregular	-	Pulsus alternans, atrial fibrillation.
• Vibrating like a drum	-	Fatel illness. Renal failure, shock.
• Lotus	-	Perfect health.
• Leech	-	Arthrities, Gout.
• Worm	-	Parasites, Worms.
• Ants	-	Terminal illness.
• Crow	-	Aortic regurgitation.

As per the text The Secrets of pulses
by Dr.Vasant Dattatraylad

The counts of pulse of the patient depend on age as per the Siddha system of Pulse reading by Dr. S.Chidambaram pillai

• Just born child	-	140 per minute
• Child	-	100 per minute
• Boy of tender age	-	120-130 per minute
• Youth	-	90 per minute
• Adult	-	70-75 per minute
• Adult female	-	75-80 per minute
• Old age	-	75 per minute
• In sitting posture	-	40 per minute
• (Male or Female)		
• In lying posture	-	67 per minute

MATERIALS AND METHODS

A Study on Naadi examination in Vippuruthi/Puttru- a randomized and blinded case control study would be carried out in the out patients Noi Naadal department of Ayothidoss Pandithar hospital of the National institute of Siddha, Tambaram sanatorium, and Chennai 47.

STUDY TYPE

- Observational type of study.

STUDY DESIGN

- A Randomized case control study, single centric study

STUDY PLACE

- Outpatient department and In patient department
National Institute of Siddha , Chennai-47.

TRIAL REGISTRY:

The study was unanimously approved by the Institutional Ethics Committee (IEC/9/2014-15/25) and was registered in Clinical Trials Registry -INDIA (2017/02/007870).

SAMPLE SIZE

- Cancer Patients - 150 ,
- Healthy Volunteers - 150

SELECTION CRITERIA:

INCLUSION CRITERIA:

- Age 20-70
- Confirmed Cancer Cases
- Healthy Volunteers

EXCLUSION CRITERIA:

- Below age 20
- Vulnerable group

CONDUCT OF STUDY

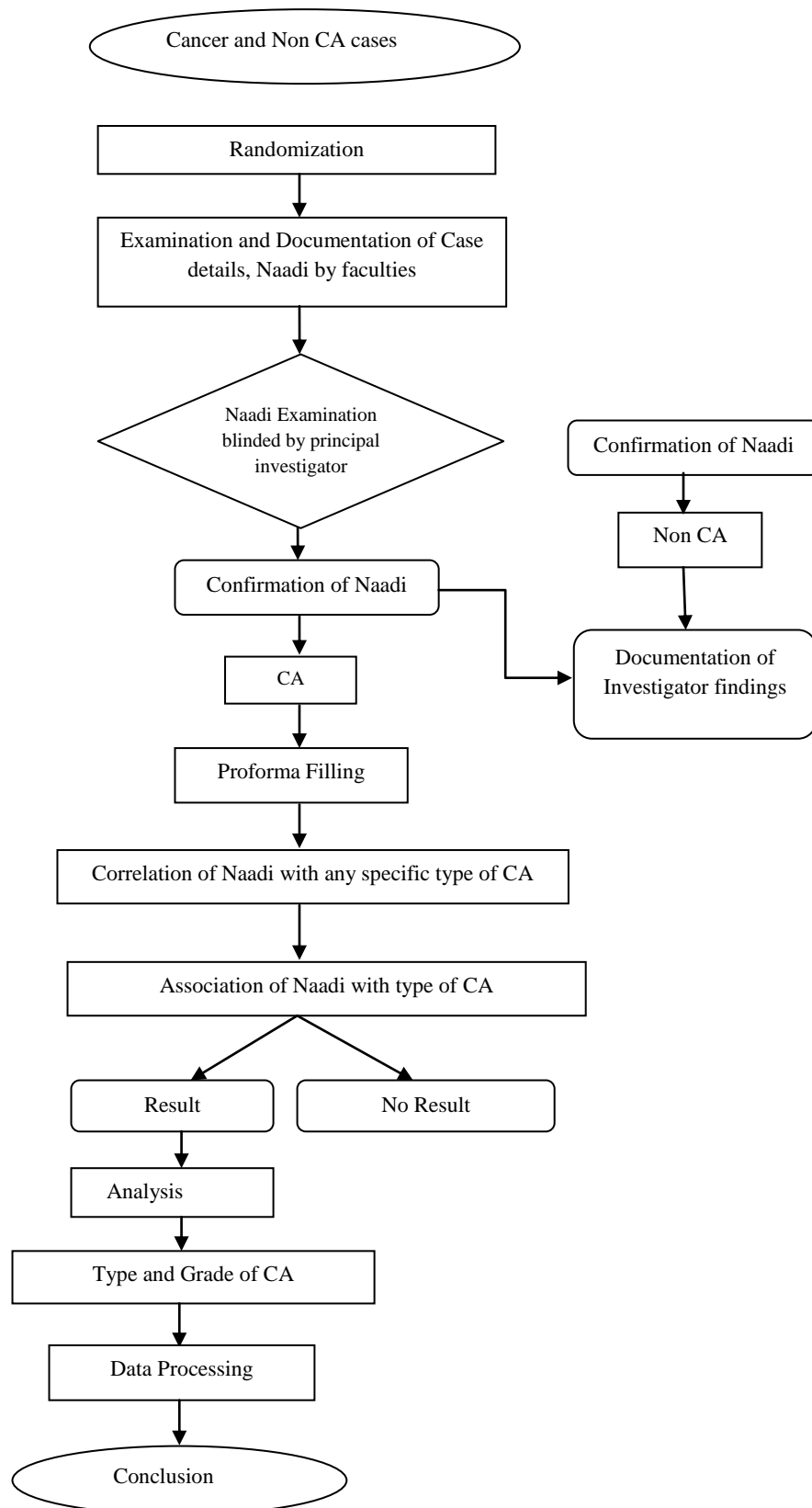
In this study two groups of patients, cancer conformed and non cancer patients/ subjects were randomized and presented to the principle investigator in a veiled manner. It was only the hand that was presented through the small hole in the veil. The investigator was masked about the identity, physical stature, healthy status and practically everything concerning the patients /subjects. The investigator was given adequate time to perceive the subtle variations in the differential pulse perception of Vatha, Pitha and Kabam humors manifesting through Naadi.

The investigator also recorded and noted the Guru Naadi manifested in the patients. It was carefully discerned for the showing up of double impinge of the pulse over the investigators pulp of the thumb longitudinally placed over the long axis of the radial bone.

The research team which randomized the cancer and non cancer patients by means of randomization to the investigator recorded all the case details and also collected the pulse detected information from the investigator soon after the end of the pulse examination with each trial participants.

Among the research team one investigator cross examined the patient/subject (unblinded) for Naadi before presenting to the principal investigator through the veil. This open unblinded observation by the second investigator has been done prior to the principal investigators assessment to avoid bias of the second investigator. The Naadi thus examined were compared for similarities and variations.

Figure no 3 : METHODOLOGY OF THE STUDY



SIDDHA PARAMETERS

1. Eight fold examination

Naadi

- Naadi nithanam
- Naadi nadai

Naa (Tongue)

- Maa padithal
- Niram
- suvai
- Vaineer ooral
- Vedippu

Niram (Complexion)

- Karuppu
- Manjal
- Veluppu

Mozhi (Voice)

- Sama oli,
- Urattha oli,
- Thazhntha oli

Vizhi (Eyes)

- Niram
- Kanneer vadithal
- Erichal
- Peelai seruthal

Meikuri (Physical Signs)

- Veppam
- Viyarvai
- Thoduvali

Malam (Stools)

- Niram
- Sikkal
- Sirutthal
- Kalichal

- Seetham

Moothiram (Urine)

Neerkuri

- Niram
- Manam
- Edai
- Alavu
- Nurai
- Enjal

DATA COLLECTION

- Annexure I – Informed consent form.
- Annexure II – Patient Information sheet.
- Annexure III – Form 1- Naadi Assessment forms by trial monitor.
- Annexure IV – Form 2- Naadi Assessment forms by principle investigator.
- Annexure V - Form 3- Naadi Assessment forms by Trial monitor and Principal Investigator.
- Annexure VI - Screening Proforma.
- Annexure VII -History Proforma
- Annexure VII -Clinical Assessment form.
- Annexure IX - Documentation of Additional information sheet.

DATA MANAGEMENT

- After enrolling the patient in the study, a separate file for each patient will be opened and all forms will be filled in the file. Study No. and Patient No. will be entered on the top of file for easy identification and arranged in a separate rack at the concerned OPD unit. Whenever study patient visits OPD during the study period, the respective patient file will be taken and necessary recordings will be made at the case record form or other suitable form.
- The Data recordings will be monitored for completion and compliance of patients by HOD and Sr. Research Officer (Statistics). All forms will be further scrutinized in presence of Investigators by Sr. Research Officer (Statistics) for logical errors and incompleteness of data before entering onto

computer to avoid any bias. No modification in the results is permitted for unbiased report.

- Any missed data found in during the study, it will be collected from the patient, but the time related data will not be recorded retrospectively
- All collected data will be entered using MS access software onto computer. Investigators will be trained to enter the patient data and cross checked by SRO.

STATISTICAL ANALYSIS

- All collected data were entered into computer using MS Access / MS Excel software by the investigator .The data were analysed using STATA Software under the guidance of SRO (Stat), NIS.
- Descriptive analysis were made and necessary tables/grphs generated to understand the profile of patients included in the study . The Statistical analysis for significance of Naadi to different types of Cancer were done .Student ‘t’ test and chi-square test ,are proposed to be performed for quantitative and qualitative data

ETHICAL ISSUES

- Patients will be examined and screened in an unbiased manner and will be subjected to the criteria.
- Informed consent will be obtained from the patient in writing, explaining in the understandable language to the patient.
- The data collected from the patient will be kept confidentially. The patient will be explained about the diagnosis.
- This study involves only the necessary investigations (mentioned in the protocol) and No other investigation would be done.
- Normal treatment procedure followed in NIS will be prescribed to the study patients and the treatment will be provided at free of cost.
- There will be no infringement on the rights of patient

S. no	Description of Task	Month													
		1-3	4-6	7	8	9	10	11	12	13-22	13-23	24-25	26-27	28-30	31-32
1	Topic selection														
2	Collection of literature														
3	Appearing for Screening														
4	Preparation of Protocol														
5	Approval from IEC														
6	Selection of Cases														
7	Data entry														
8	Preconsolidation														

9	Analysis &interpretation														
10	Discussion &revision														
11	Submission														

Table no 6 : GANNT CHART:



OBSERVATION AND RESULTS

GENDER DISTRIBUTION

Table 7: Gender distribution

Gender	CA	Non CA	Total
Male	55 (45.80%)	70 (39.50%)	125 (42%)
Female	65 (54.20%)	107 (60.50%)	172 (58%)
Total	120 (40.40%)	177 (59.60%)	297 (100%)

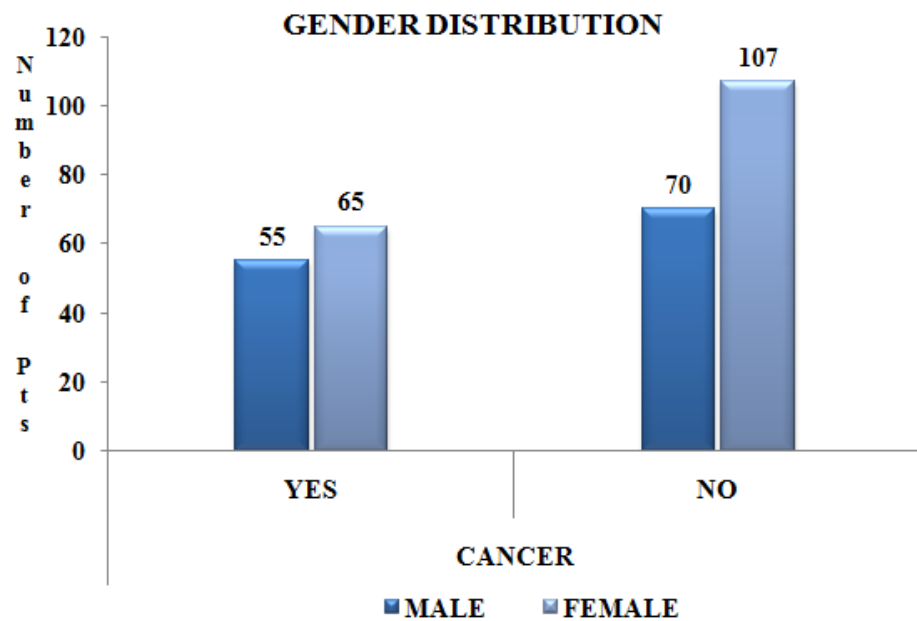


Figure: 4 : Gender distribution

Observation: Among 297 cases who were enrolled, 120 were having cancer and the remaining 177 were non cancer cases included in this study. In the 120 Cancer cases, 55 cases were male and 65 cases were female. In 177 non cancer cases, 70 cases were male and 107 cases were female who were included in this study.

Inference: Majority of cases were female (60.50%) in Non Cancer .In Cancer group also, majority of cases were female (54.20%).

AGE DISTRIBUTION:

Table 8: Age distribution

AGE	CANCER		TOTAL	NON CANCER		TOTAL	Grand Total
	M	FM.		M	FM.		
20-29	-	-	0	18	28	46	46
30-39	2	4	6	21	36	57	63
40-49	4	8	12	16	24	40	52
50-59	12	12	24	6	9	15	39
60-69	26	23	49	7	7	14	63
70-79	10	18	28	2	3	5	33
80-89	1	-	1	-	-	0	1
TOTAL	55	65	120	70	107	177	297

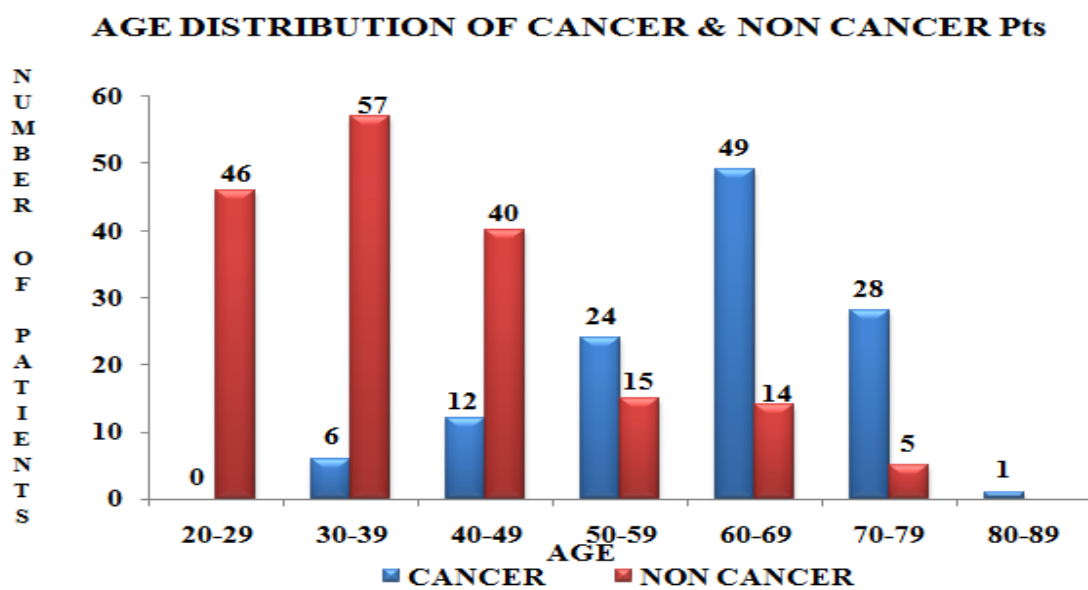


Figure: 5: Age distribution of cancer & Non cancer Pts

Observation: Among 297 cases, 46 cases fall under the age group of 20-29 yrs, 63 cases come under 0-39 yrs ,52 cases come under 40-49 age groups.39 cases fall under 50-59yrs ,63 cases come under 60-69 years,33 cases fall under 70-79 yrs and one case come under the age group category of 80-89 yrs.

Inference: In 120 Cancer cases, majority of cases (49 cases) fall under the age group 60 - 69 years. In 177 Non cancer cases, majority of cases (57 cases) fall under the age group of 30-39 yrs.

TYPES OF CANCER

Table 9: Types of cancer

TYPES OF CANCER	NO. OF PATIENTS	TYPES OF CANCER	NO. OF PATIENTS
Enbuputru (Bone CA)	2	Veethana kolaputru (Thyroid CA)	4
Eraipaiputru (Adenocarcinoma CA of stomach)	5	Melannaputru (Upper Palate CA)	1
Kalleralputru (Liver CA)	4	Naakkuputru (Tongue CA)	4
Kanayaputru (Pancreas CA)	4	Pupusaputru (Lung CA)	6
Karuppaiputru (Uterus CA)	12	Rathaputru (Blood CA)	3
Kudalputru (Colon CA)	5	Seviputru	1
Purastha kolaputru (Prostate CA)	3	Sinaipaiputru (Ovarian CA)	1
Kuralvalaiputru (Glottis CA)	12	Siruneerpaiputru (Bladder CA)	6
Umizhneer kolaputru (Parotid gland CA)	1	Tholputru (Skin CA)	1
Lasunaputru (Tonsil CA)	3	Vaiputru (Oral CA)	6
Malakudalputru (SigmoidCA)	6	Viregiputru (Rectal CA)	3
Marbagaputru (Breast CA)	27	Grand Total	120

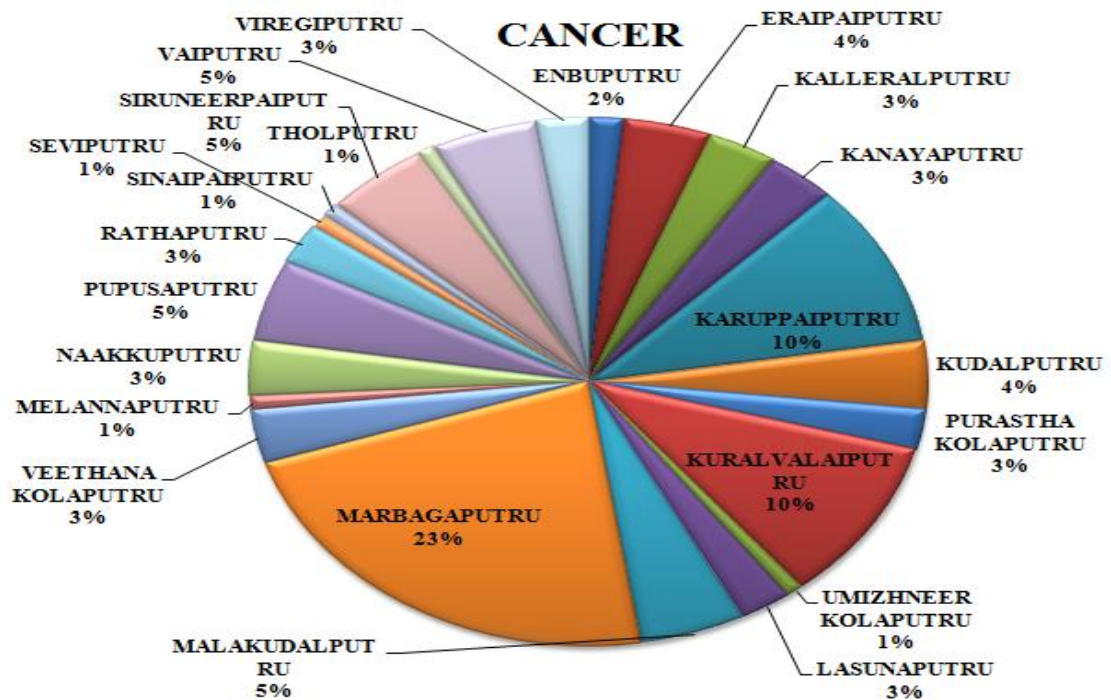


Figure: 6: Types of cancer

Observation: Among 120 Cancer cases, 2 cases were of Enbu Putru, 5 cases were of Eraipai Putru , 4 cases were of Kalleral Putru, 12 cases were of Karuppai Putru , 5cases were of Kudal Putru ,3 cases were of Prosthakola Putru , 12 cases were of Kural valai Putru,One case of Umizh neerkola Putru, 3 cases of Malakudal Putru ,27 cases were of Marbaga Putru , 4 cases were of Veethana kola Putru , one case were of Melanna Putru, 6 cases were of Puppusa Putru ,3 cases were of Ratha Putru , 1 case were of Sevi Putru, 6 cases were of Siruneer pai Putru , 1 cases were of Thol Putru ,6 cases were of Vai Putru , 3 cases were of Viregi Putru were taken in this study.

Inference: In 120 Cancer cases, majority of cases were of Marbaga Putru and the number of cases were 27.

DEGREE OF ACCURACY:

Table 10: Degree of accuracy

DIAGNOSIS	ACCURACY	ERROR	TOTAL
Detected Cancer	88 (73.3%)	27+5 (Equivocal pulse)	120
Detected Non cancer	139 (78.5%)	38	177

Calculation of Cancer detection by Investigator:

- Sensitivity = $a/(a+c) = 88/(88+27) = 88/115 \times 100 = 76.5\%$
- Specificity = $d/(b+d) = 139/(38+139) = 139/177 = 78.5\%$
- False Positive = $38/177 \times 100 = 21\%$
- False Negative = $27/120 \times 100 = 22.5\%$

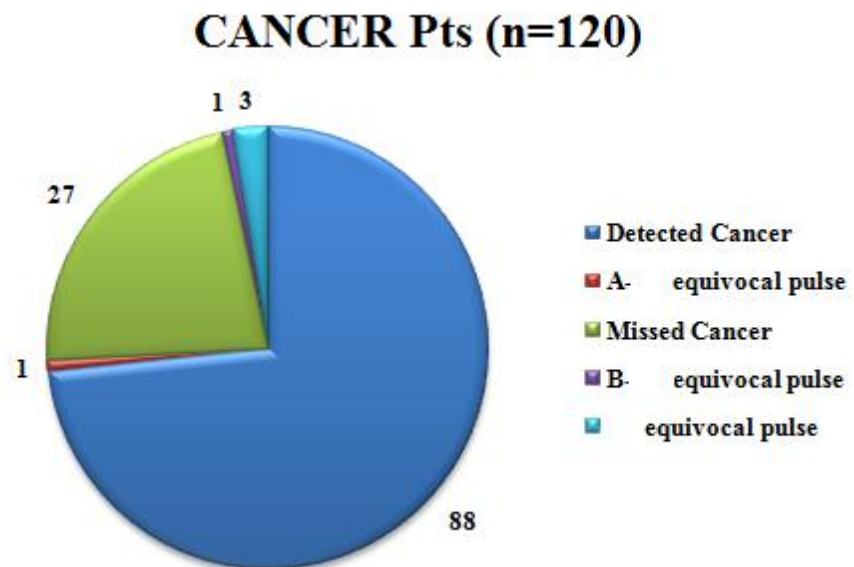


Figure: 7: Degree of Accuracy in cancer Pts

NON CANCER Pts (n=177)

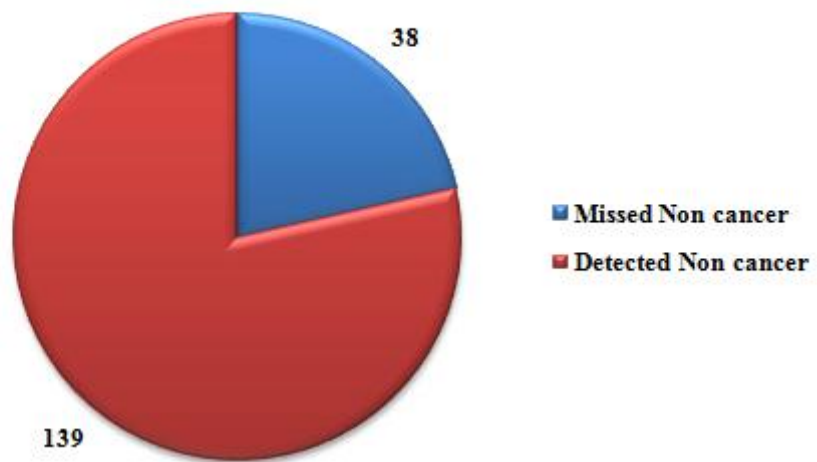


Figure:8: Degree of Accuracy in non cancer Pts

Observation: Among 297 cases enrolled 120 had Cancer and remaining 177 did not have cancer and were included in this study. In 120 CA cases, 88 cases were detected right as Cancer by the principal investigator. In 177 Non Cancer subjects 139 were declared correctly as not having cancer by the principal investigator in this study.

Inference: The investigator had an accuracy of 73.3% in detecting the cancer during the blinded screening of Naadi perception. And the investigator was correct in ruling out 78.5% of subjects of not having cancer in any form. Sensitivity was 76.5 %, Specificity was 78.5% in this study.

INVESTIGATOR 1- Naadi perception for CA and Non CA

Table 11: INVESTIGATOR 1-Naadi perception for CA and Non CA

NAADI	CANCER	Accuracy	Error	NON CANCER	Accuracy	Error
KP	27	25 (71%)	1	11	1 (28.9%)	10
KV	41	41(80.3%)	0	10	2(19.6%)	8
PK	9	3(33.3%)	6	18	16 (66.6)	2
PV	14	7 (20%)	7	56	52(80%)	4
VK	3	2(20%)	1	12	7(80%)	5
VP	23	10(25.5%)	12	67	59(74.4%)	8

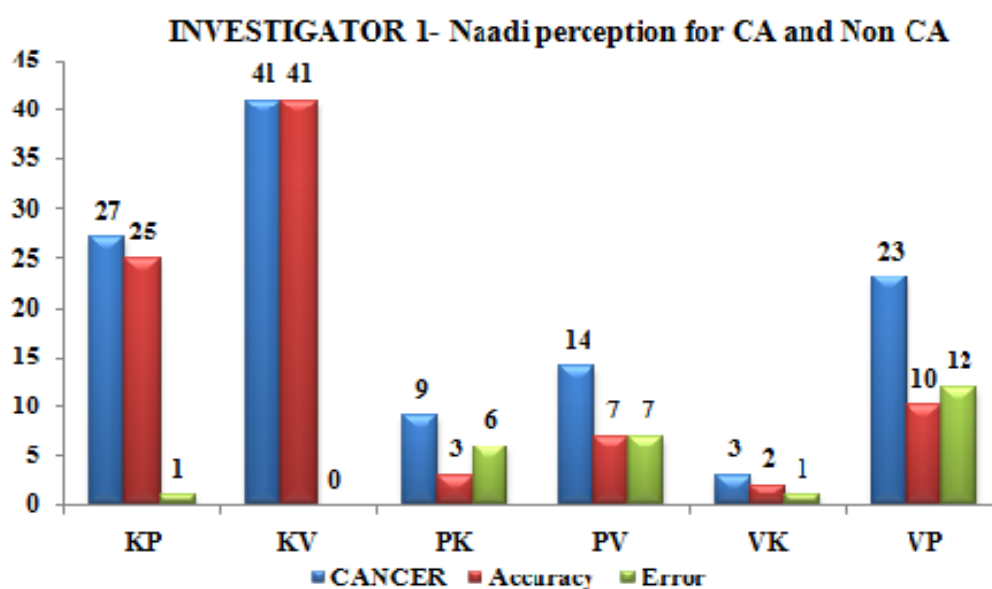


Figure: 9: INVESTIGATOR 1- Naadi perception for CA and Non CA

Observation : Out of 120 Cancer Cases , Kapha pitha Naadi was felt in 25 cases rightly and exhibits the cancer sentivity of 71%.Kapha vatha Naadi was felt in 41 cases and exhibits the cancer sentivity of 80.3% , Pitha kapha Naadi was felt in 3 cases and exhibits the cancer sentivity of 33.3% , Pitha vatha Naadi was felt in 7 cases and exhibits the cancer sentivity of 20% , Vatha pitha Naadi was felt in 10 cases and exhibits the cancer sentivity of 25.5% , Vatha Kapha Naadi was felt in 2 cases and exhibits the cancer sentivity of 20%correctly by the Investigator 1.

Inference : In Cancer cases , Majority of cases Naadi was found to be Kapha vatham in 41 cases and exhibits the cancer sensitivity of 71%,Kapha pitha Naadi was felt in 27 cases and exhibits the cancer sensitivity of 80.3% by the Investigator1. Since the Investigator 1 was blinded and that age couldn't be ascertain all Kapha Pitha Naadi patients except who didn't manifest prominent Guru Naadi.

INVESTIGATOR 2- Naadi perception for CA and Non CA

NAADI	CANCER	NON CANCER	TOTAL
KP	25	4	29
KV	36	8	44
PK	9	22	31
PV	18	57	75
V	2	1	3
VK	6	12	18
VP	24	73	97
TOTAL	120	177	297

Table 12 : INVESTIGATOR 2- Naadi perception for CA and Non CA

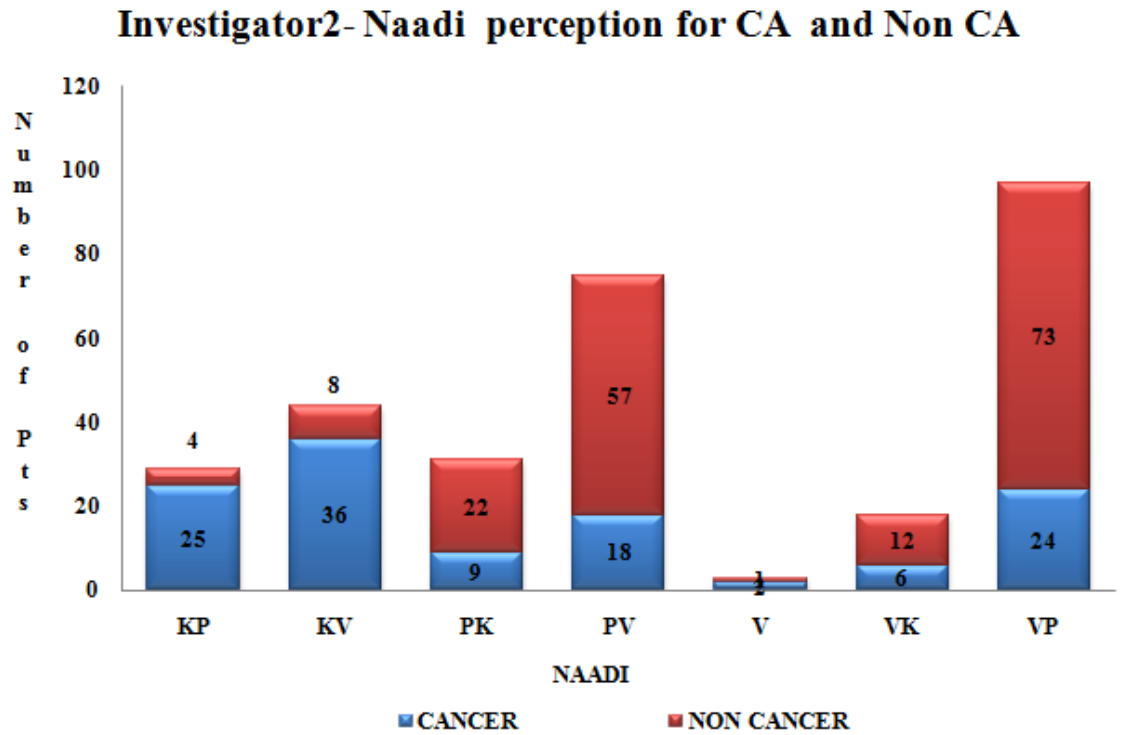


Figure: 10: INVESTIGATOR 2- Naadi perception for CA and Non CA

Investigator2- Naadi perception for CA

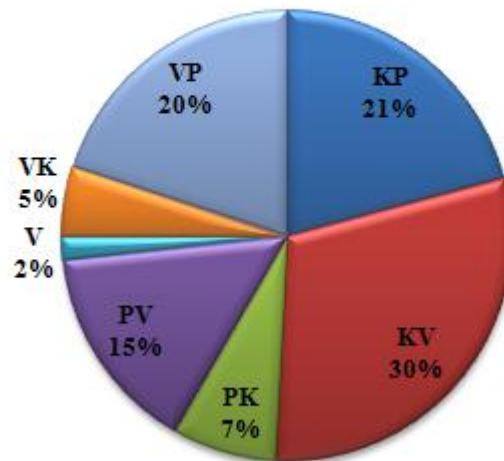


Figure: 11 : INVESTIGATOR 2- Naadi perception for CA and Non CA (%)

Observation: Out of 297 Cases, Kapha pitha Naadi was felt in 29 cases. Kapha vatha Naadi was felt in 44 cases, Pitha kapha Naadi was felt in 31 cases, Pitha vatha Naadi was felt in 75 cases, only vatha Naadi was felt in 3 cases, Vatha pitha Naadi was felt in 97 cases, Vatha Kapha Naadi was felt in 18 cases by the Investigator 2.

Inference: In Cancer cases, majority of cases had Kapha vatham (36 cases) and Kapha pitha Naadi was felt in 25 cases by the Investigator 2.

INVESTIGATOR 1 - GURU NAADI

Table: 13: INVESTIGATOR 1- Guru Naadi for CA and Non CA

GURU NAADI- SINGLE/DOUBLE FELT	CANCER	NON CANCER	TOTAL
Double line	76	20	96
Double line -Mild	1	-	1
Not felt	4	3	7
Single line	39	153	192
Single line Mild	-	1	1
TOTAL	120	177	297

The reliability of Guru Naadi in the detection of cancer:

- Sensitivity = $a/(a+c) = 76/(76+39) = 76/115 \times 100 = 66\%$
- Specificity = $d/(b+d) = 153/(20+153) = 153/173 = 88.4\%$
- False Positive = $20/177 \times 100 = 11.2\%$
- False Negative = $39/120 \times 100 = 32.5\%$.

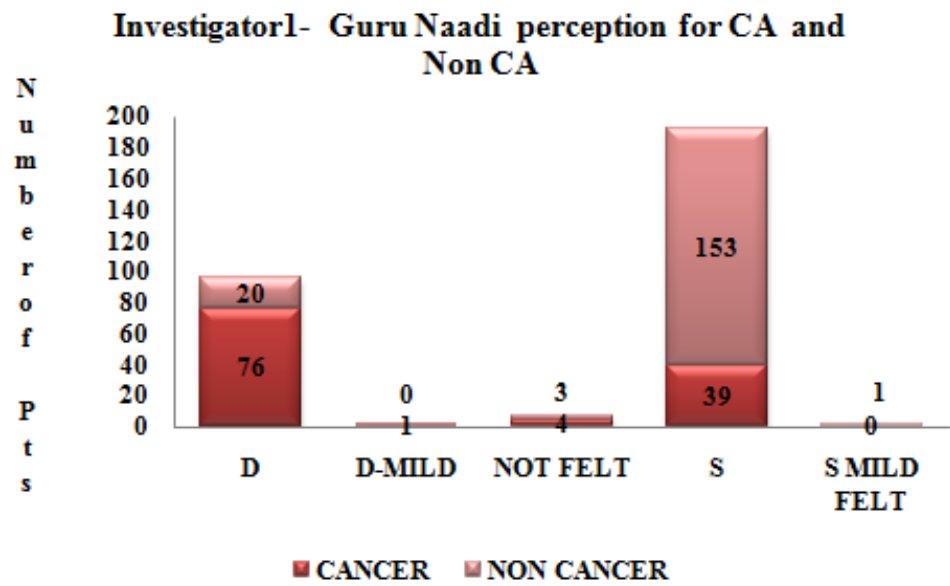


Figure: 12 : INVESTIGATOR 1- Guru Naadi for CA and Non CA

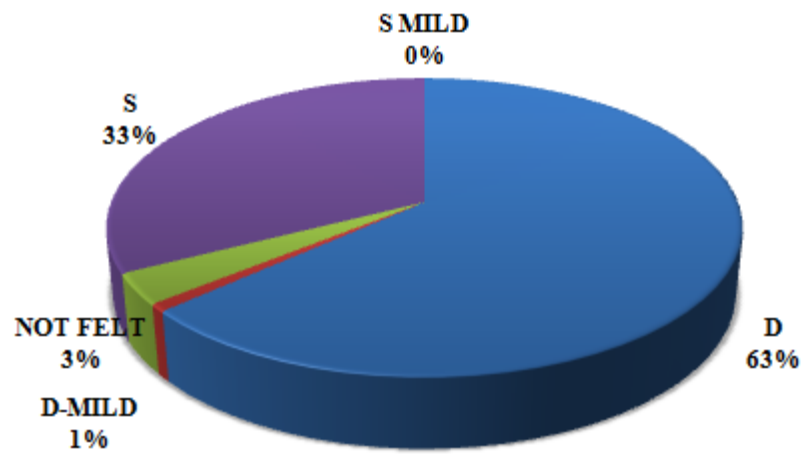


Figure: 13: INVESTIGATOR 1- Guru Naadi for CA and Non CA

Observation: Out of 297 cases, Double line Naadi was felt in 96 cases, Double line Naadi felt mildly to 1 case .Single line Naadi was felt in 192 cases, and it was mildly felt in 1 case. Out of 297 cases, 7 cases Naadi was not found properly by Investigator 1.

Inference: In Majority of Cancer cases, Double line Naadi was felt in 76 cases(63.3%) and Single line Naadi was felt in 39 cases (86.4%) by the Investigator 1.Sensitivity was 66 %; Specificity was 88.4% in this study.

INVESTIGATOR 2 GURU NAADI

Table 14: INVESTIGATOR 2- Guru Naadi for CA and Non CA

GURU NAADI- SINGLE/DOUBLE FELT	CANCER	NON CANCER	TOTAL
Double line	80	9	89
Double line -Mild	1	-	1
Not felt	2	1	3
Single line	36	167	203
Single line Mild	1	-	1
TOTAL	120	177	297

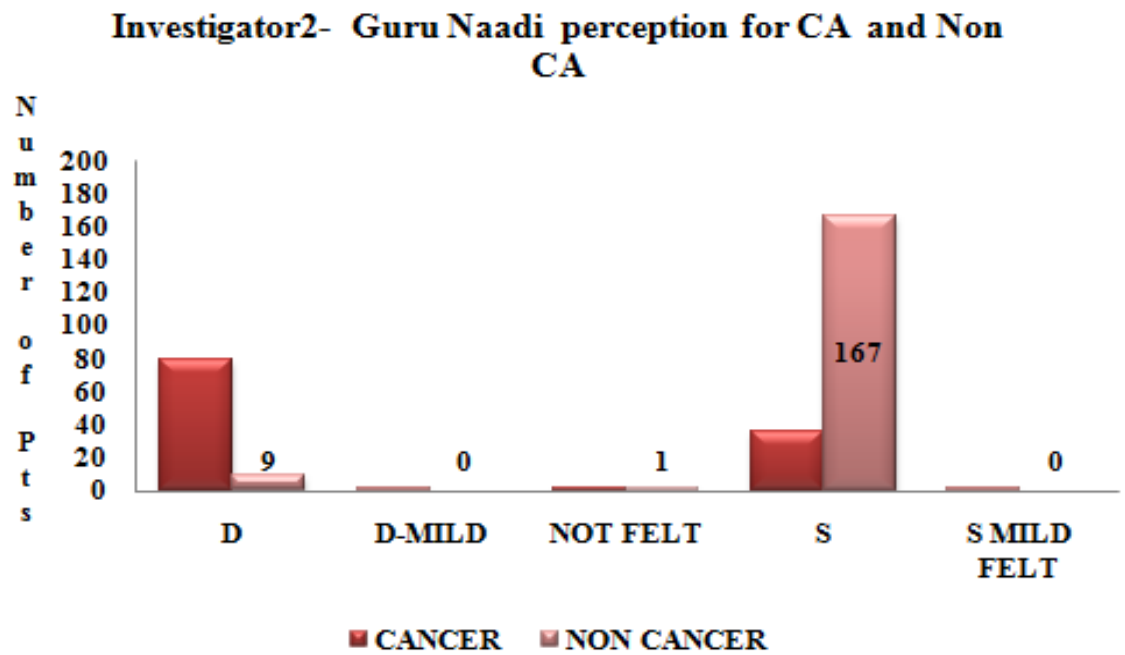


Figure: 14: INVESTIGATOR 2- Guru Naadi for CA and Non CA

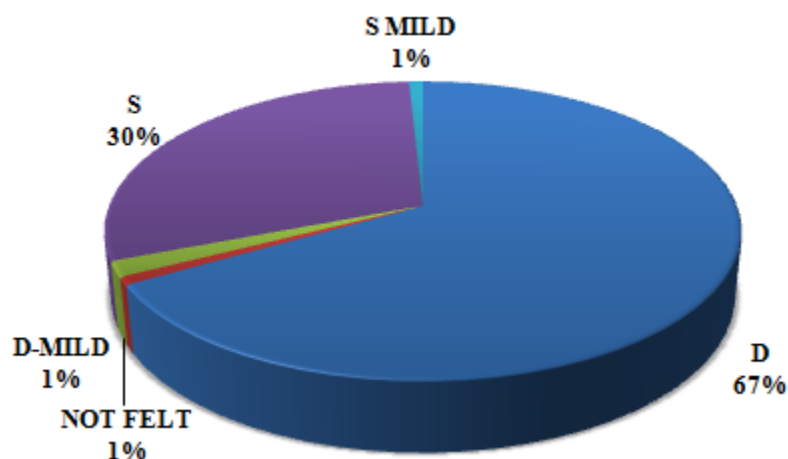


Figure: 15: INVESTIGATOR 2- Guru Naadi for CA and Non CA

Observation: Out of 297 cases, double line Naadi was felt for 89cases, double line Naadi felt mildly to 1 case. Single line Naadi was felt in 203 cases, and it was mildly felt in 1 case. Out of 297 cases, 3 cases Naadi was not found properly by the Investigator 1.

Inference: In Majority of Cancer cases, Double line Naadi was felt in 80cases and Single line Naadi was felt in 36 cases by the Investigator 2.

NAADI VS GURU NAADI FOR CANCER PATIENTS BY INVESTIGATOR 1**Table15: INVESTIGATOR 1- Naadi vs Guru naadi for CA and Non CA**

NAADI\GURU NAADI	D	S	D- MILD	NOT FELT	TOTAL
KP	22	4	1	-	27
KV	34	7	-	-	41
PK	3	6	-	-	9
PV	7	7	-	-	14
V	-	-	-	3	3
VK	1	1	-	1	3
VP	9	14	-	-	23
TOTAL	76	39	1	4	120

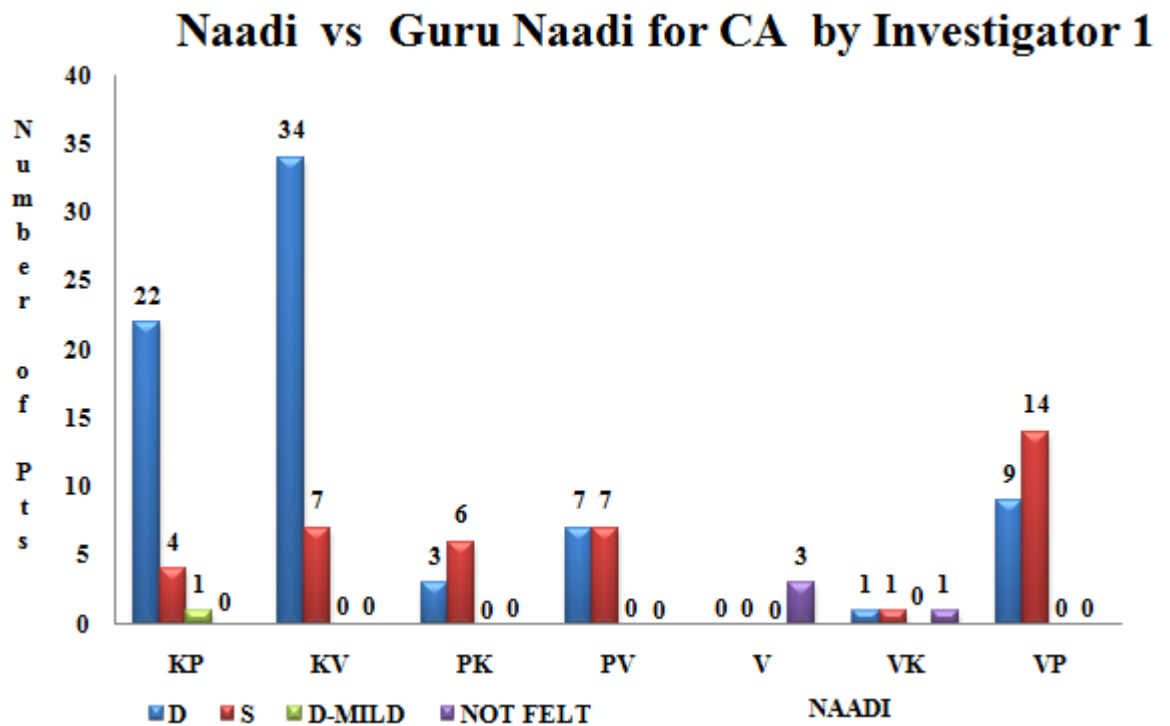


Figure: 16: INVESTIGATOR 1- Naadi vs Guru naadi for CA and Non CA

Observation : Among 120 cases of cancer ,41 patients manifest Kapha vatha Naadi and in them 34 of them showed double line in guru Naadi ,7 showed Single line in Guru Naadi. 27 patients manifest Kapha pitha Naadi and in them 22 of them showed double line pulse in guru Naadi ,4 showed Single line Guru Naadi and 1 showed mild double line Guru Naadi . 9 patients manifest Pitha kapha Naadi and in them 3 showed double line in Guru Naadi, 6 showed Single line in Guru Naadi. 14 patients manifest Pitha vatha Naadi and in them 7 of them showed double line in Guru Naadi, 7 showed Single line in Guru Naadi. 3 showed vatha kapha Naadi of which 1 showed double line guru Naadi, 1 showed Single line Guru Naadi and for one case Naadi not felt properly. 23 patients manifest Vatha pitha Naadi and in them 9 of them showed double line in guru Naadi , 14 showed Single line in Guru Naadi by the Investigator1

Inference: In Cancer cases, major had Kapha vatha Naadi as well as Double Naadi in 34 cases (82.9%) by the Investigator1.

NAADI VS GURU NAADI FOR CANCER PATIENTS BY INVESTIGATOR 2

Table 16: INVESTIGATOR 2- Naadi vs Guru Naadi for CA and Non CA

NAADI\GURU NAADI	D	S	D- MILD	S MILD	NOT FELT	TOTAL
KP	20	5	-	-	-	25
KV	30	6	-	-	-	36
PK	6	3	-	-	-	9
PV	7	10	1	-	-	18
V	-	-	-	-	2	2
VK	2	4	-	-	-	6
VP	15	8	-	1	-	24
TOTAL	80	36	1	1	2	120

Naadi vs Guru Naadi for CA by Investigator 2

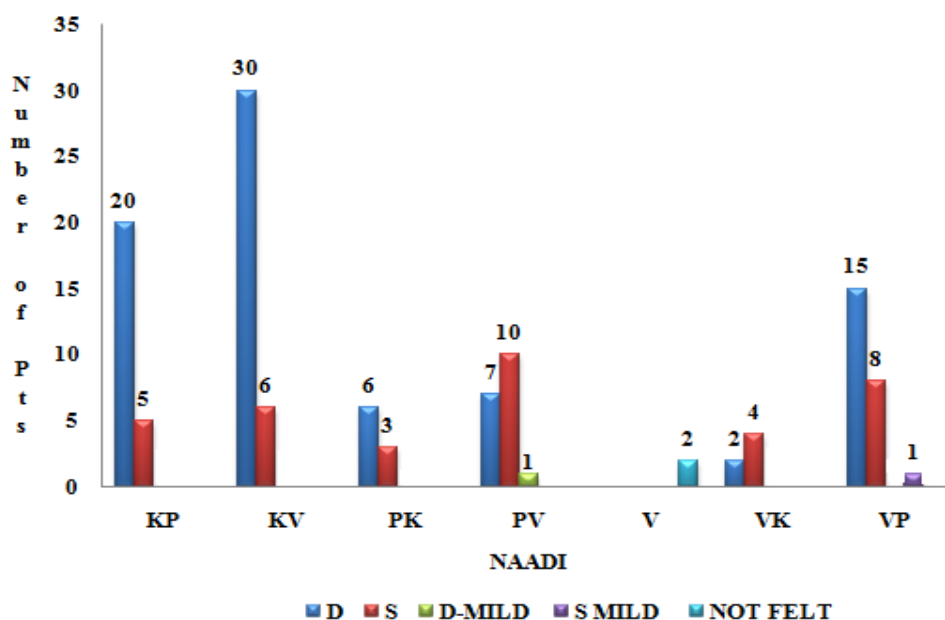


Figure: 17: INVESTIGATOR 2- Naadi vs Guru Naadi for CA and Non C

Observation : Among 120 cases of cancer ,36 patients manifest Kapha vatha Naadi and in them 30 of them showed double line in guru Naadi ,6 showed Single line in Guru Naadi.25 patients manifest Kapha pitha Naadi and in them 20 of them showed double line pulse in guru Naadi ,5 showed Single line Guru Naadi . 9 patients manifest Pitha kapha Naadi and in them 6 showed double line in guru Naadi ,3 showed Single line in Guru Naadi. 18 patients manifest Pitha vatha Naadi and in them 7 of them showed double line in guru Naadi ,10 showed Single line in Guru Naadi and 1 patient showed mild double line Guru Naadi. 6 patient showed vatha kapha Naadi of which 2 showed double line guru Naadi, 4 showed Single line Guru Naadi and for one case Naadi not felt properly. 24 patients manifest Vatha pitha Naadi and in them 15 of them showed double line in guru Naadi , 8 showed Single line in Guru Naadi and one showed single line guru Naadi by the Investigator 2.

Inference: In Cancer cases, major had Double Naadi as well as Kapha vatha Naadi in 30 cases by the Investigator 2.

INTER OBSERVER VARIATION AND SIMILARITIES IN NAADI PERCEPTION (CA & NON CA PATIENTS)

Table 17: Inter observer variation and similarities in Naadi perception (CA & Non CA Patients)

Investigator 1	Investigator 2							TOTAL
	KP	KV	PK	PV	V	VK	VP	
KP	17	4	11	6	-	-	-	38
KV	7	33	1	4	-	5	1	51
PK	2	1	17	4	-	1	2	27
PV	1	1	-	26	-	-	42	70
V	-	-	-	-	3	-	1	4
VK	-	3	1	-	-	10	1	15
VP	2	2	-	35	-	2	49	90
(blank)	-	-	1	-	-	-	1	2
TOTAL	29	44	31	75	3	18	97	297

Observation : Among 297 cases ,For 17 cases Naadi was felt as Kapha pitha Naadi by both Investigator 1 and 2.For 33 cases, Naadi was felt as Kapha vatha Naadi by both Investigator 1 and 2.For 17 cases, Naadi was felt as Pitha kapha Naadi by both Investigator 1 and 2. For 26 cases, Naadi was felt as Pitha vatha Naadi by both Investigator 1 and 2. For 10 cases, Naadi was felt as Vatha kapha Naadi by both Investigator 1 and 2. For 49 cases, Naadi was felt as vatha pitha Naadi by both Investigator 1 and 2.

Inference: In majority, For 49 cases Naadi was felt as vatha pitham by both the Investigator 1 and 2.This Inter observer variation confirms the veracity of the Naadi science and also the methodology of observation. This also indicates that Naadi examination is merely not a subjective parameter but a reproducible process.

INTER OBSERVER VARIATION AND SIMILARITIES IN NAADI PERCEPTION (CA PATIENTS)

Table18: Inter observer variation and similarities in Naadi perception (CA Patients)

Investigator 1	Investigator 2							TOTAL
	KP	KV	PK	PV	V	VK	VP	
KP	16	4	3	4	-	-	-	27
KV	6	28	1	2	-	3	1	41
PK	1	-	5	2	-	-	1	9
PV	1	1	-	3	-	-	9	14
V	-	-	-	-	2	-	1	3
VK	-	1	-	-	-	2	-	3
VP	1	2	-	7	-	1	12	23
TOTAL	25	36	9	18	2	6	24	120

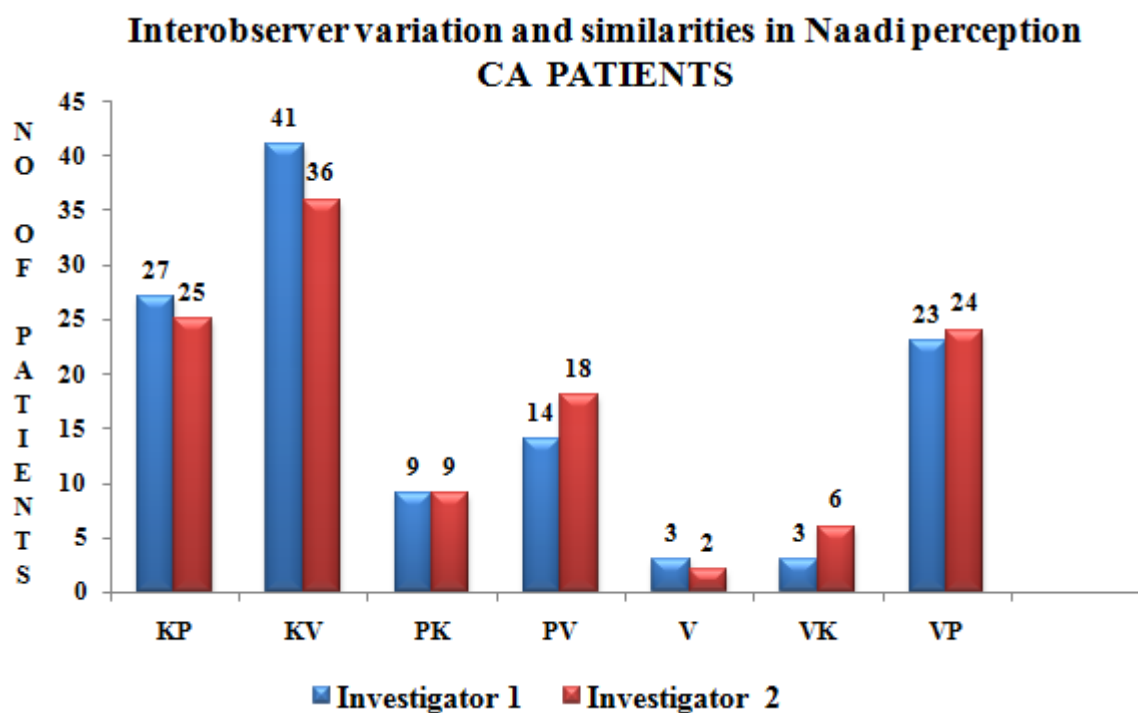


Figure: 18: INVESTIGATOR 2- Naadi vs Guru Naadi for CA and Non CA

Observation : Among 120 Cancer cases ,For 16 cases Naadi was felt as Kapha pitha Naadi by both Investigator 1 and 2.For 28 cases, Naadi was felt as Kapha vatha Naadi by both Investigator 1 and 2.For 5 cases , Naadi was felt as Pitha kapha Naadi by both Investigator 1 and 2. For 3 cases, Naadi was felt as Pitha vatha Naadi by both Investigator 1 and 2. For 2 cases, Naadi was felt as Vatha kapha Naadi by both Investigator 1 and 2. For 12 cases, Naadi was felt as vatha pitha Naadi by both Investigator 1 and 2.

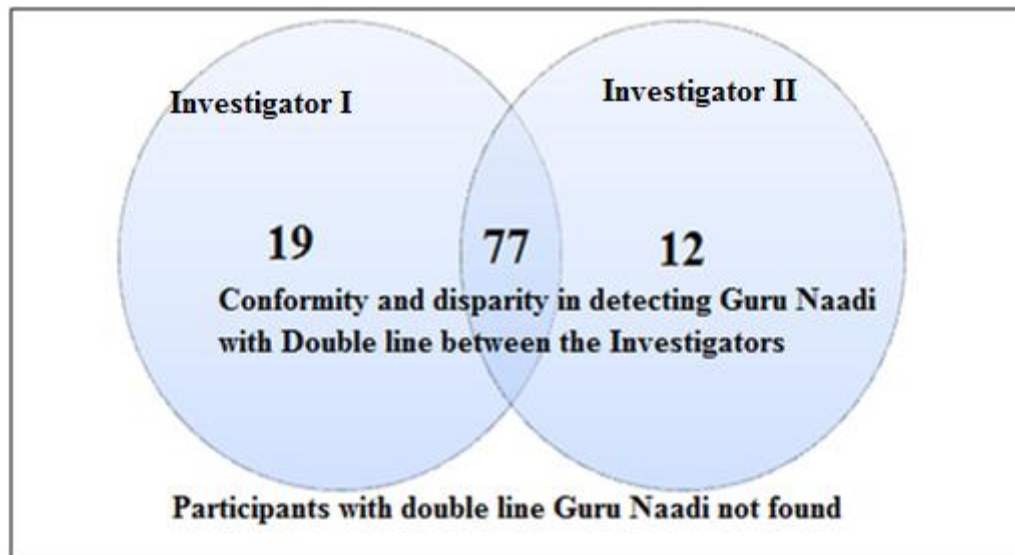
Inference: Among the two Investigators, it is that both of them perceive with maximum conformity that they agreed together in 28 patients picking up the Kapha vatha Naadi.

INTER OBSERVER VARIATION AND SIMILARITIES IN GURU NAADI PERCEPTION (NON CA AND CA PTS)

**Table19: Inter observer variation and similarities in Guru Naadi perception
(Non CA and CA pts)**

Investigator 1	Investigator 2					TOTAL
	D	D-MILD	NOT FELT	S	S MILD	
Double line	77	-	-	19	-	96
Double line - Mild	1	-	-	-	-	1
Not felt	2	-	3	1	1	7
Single line	9	1	-	182	-	192
Single line Mild	-	-	-	1	-	1
TOTAL	89	1	3	203	1	297

Figure: 19: Distribution of Double line Guru Naadi among study population



Observation: Among 297 cases, For 77 cases Naadi was felt as Double Naadi by both Investigator 1 and 2. For 182 cases, Naadi was felt as Single Naadi by both Investigator 1 and 2.

Inference: Investigator 1 felt Double line Guru Naadi in 96 patients where as Investigator 2 felt Double line Guru Naadi in 89 patients with the overlap in 77 patients. Since, In 77 cases among 297 cases both investigator felt Double line Guru , the concept Naadi of Double line Guru Naadi and its existence are hear by detected and proved. The oveerlap percentage is 80 % in the perception of Double lined Guru Naadi pulse.

INTER OBSERVER VARIATION AND SIMILARITIES IN GURU NAADI PERCEPTION (CA PTS)

Table:20: Inter observer variation and similarities in Guru Naadi perception (CA Patients)

Investigator 1	Investigator 2					TOTAL
	D	D-MILD	NOT FELT	S	S MILD	
Double line	69	-	-	7	-	76
Double line - Mild	1	-	-	-	-	1
Not felt	1	-	2	-	1	4
Single line	9	1	-	29	-	39
TOTAL	80	1	2	36	1	120

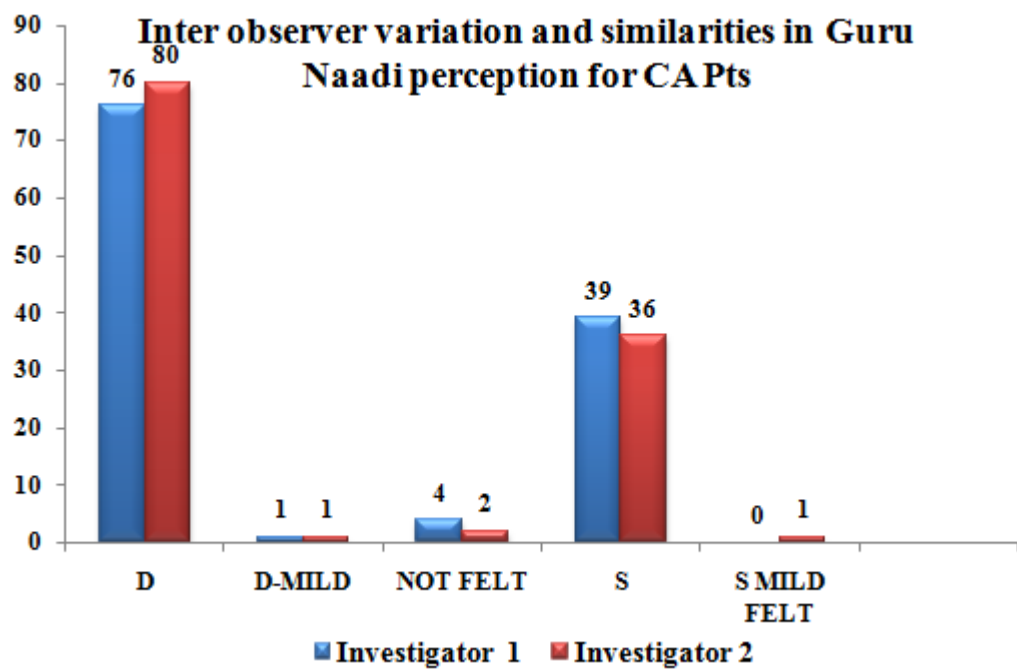
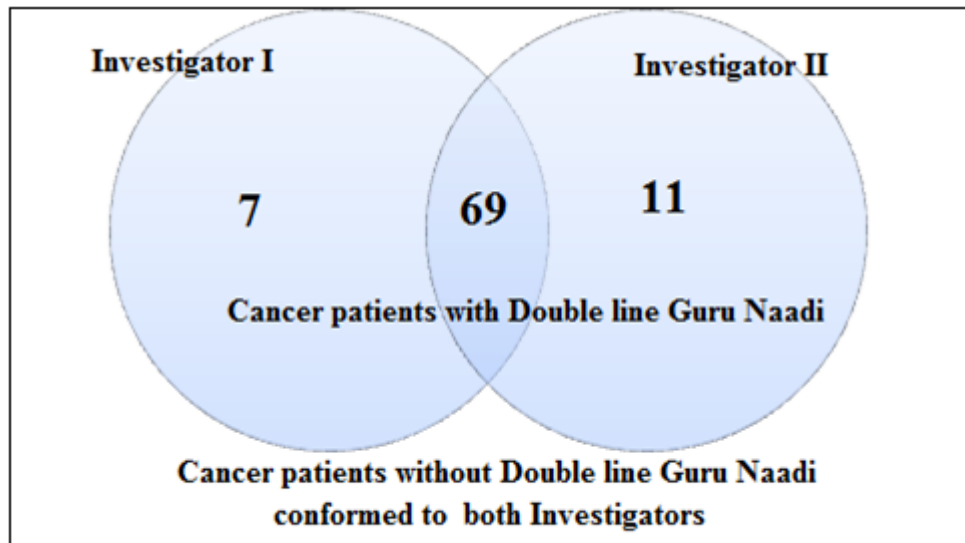


Figure: 20: Inter observer variation and similarities in Guru Naadi perception (CA Pts)

**Figure: 21 Distribution of Double line Naadi in Cancer patient group
(As detected by two investigators)**



Observation: Among 120 Cancer cases, For 69 cases Naadi was felt as Double Naadi by both Investigator 1 and 2. For 29 cases, Naadi was felt as Single Naadi by both Investigator 1 and 2.

Inference: Investigator 1 felt Double line Guru Naadi in 76 patients where as Investigator 2 felt Double line Guru Naadi in 80 patients with the overlap in 69 patients. Since, In 69 cases among 297 cases both investigator felt Double line Guru , the concept Naadi of Double line Guru Naadi and its existence are hear by detected and proved. The overlap percentage is 80 % in the perception of Double lined Guru Naadi pulse.

TYPES OF CANCER AND NAADI

Table:21: Types of Cancer and Naadi

S.No	DIAGNOSIS	NAADI							
		KP	KV	PK	PV	V	VK	VP	Naadi Total
1	ENBUPUTRU		2						2
2	ERAIPAIPUTRU	1	2					2	5
3	KALLERALPUTRU				2			2	4
4	KANAYAPUTRU	3						1	4
5	KARUPPAIPUTRU	3	3		2		2	2	12
6	KUDALPUTRU	2	3						5
7	KURALVALAIPUTRU	3	4	1	3			1	12
8	LASUNAPUTRU	1	2						3
9	MALAKUDALPUTRU	2		1				3	6
10	MARBAGAPUTRU	6	8	1	1	2	1	8	27
11	MELANNAPUTRU			1					1
12	NAAKKUPUTRU	1	1	1	1				4
13	PUPUSAPUTRU		4	2					6
14	PROSTHAKOLAPUTRU		3						3
15	RATHAPUTRU	1	1					1	3
16	SEVIPUTRU			1					1
17	SINAIPAIPUTRU				1				1
18	SIRUNEERPAIPUTRU		1	1	2			2	6
19	THOLPUTRU	1							1
20	UMIZHNEERKOLAPUTRU		1						1
21	VAIPUTRU	2	3		1				6
22	VEETHANAKOLAPUTRU		2		1			1	4
23	VIREGIPUTRU	1	1			1			3
24	Grand Total	27	41	9	14	3	3	23	120

Observation : Out of 120 cases, 2 cases of Enbu Putru, 5 cases of Eraipai Putru, 4 cases of Kalleral Putru, 4 cases of Kanaya Putru, 12 cases of Karuppai Putru, 5 cases of Kudal Putru, 12 cases of Kural valai Putru, 3 cases of Lasuna Putru, 6 cases of Malakudal Putru, 27 cases of Marbaga Putru, 1 cases of Mellana Putru, 4 cases of Naakku Putru, 6 cases of Puppasa Putru, 3 cases of Prosthakola Putru, 3 cases of Ratha Putru, 1 cases of Sevi Putru, 1 cases of Sinai Putru, 6 cases of Siruneerpai Putru, 1 cases of Thol Putru, 1 cases of Umizhneerkola Putru, 6 cases of Vai Putru, 4 cases of Veethanakola Putru, 3 cases of Viregi Putru were included in this study

Inference: In 120 Cancer cases, Majority of cases were of Marbaga Putru (Breast Cancer). In Marbaga Putru, 6 cases Naadi was felt as Kapha Pitham. 8 cases Naadi was felt as Kaphavatha. one case Naadi was felt as Pitha Kapham, 1 case Naadi was felt as Pitha vatham, 6 cases Naadi was felt as Vathapitham 1 case Naadi was felt as Vathakapham and 2 cases naadi was not found properly due to Lymphoedema of upperlimbs after Radical mastectomy especially in left hand (females).

INTRA OBSERVER VARIATION

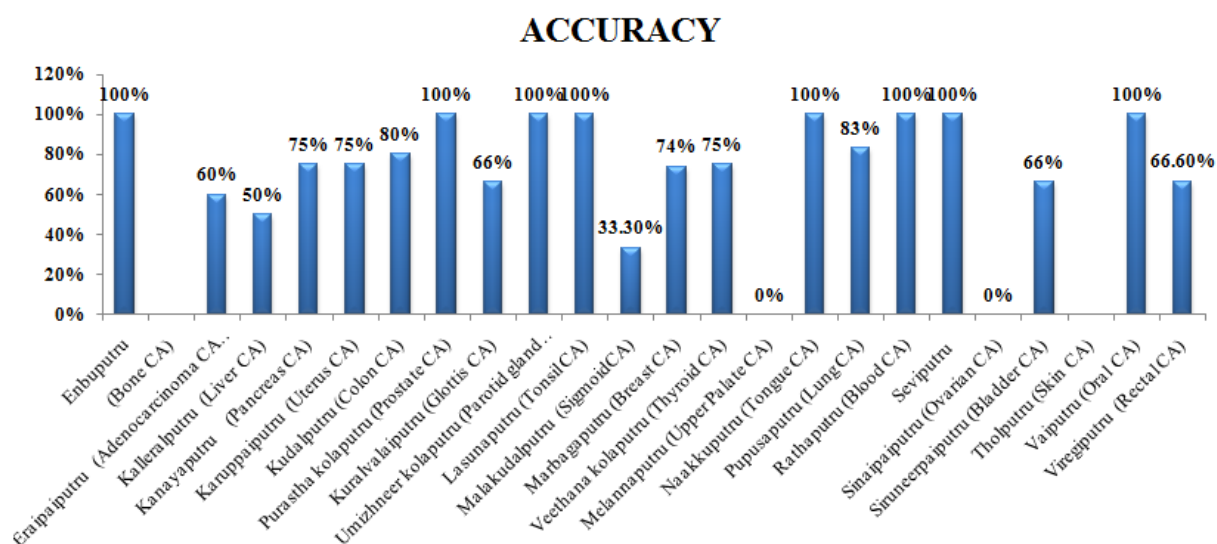
Table: 22: INTRA OBSERVER VARIATION

Case no.	Actual diagnosis	Investigator 1st diagnosis	Investigator 2nd diagnosis
1	Kudal Putru	A-KP, D	A-KP, D
2	Vai Putru	A-KV,D	A-KV,D
3	Kuralvalai Putru	B-PV,S	A-KP,S
4	Lasuna Putru	A-KV,D	A-KP,D
5	Non Cancer	A-KP,S	B-PK,S

**Table: 23: INVESTIGATOR SENSITIVITY OF DETECTING CANCERS AMONG
VARIOUS TYPES**

S.NO.	TYPE OF CANCER	ACCURACY
1.	Enbuputru (Bone CA)	100%
2.	Eraipaiputru (Adenocarcinoma CA of stomach)	60%
3.	Kalleralputru (Liver CA)	50%
4.	Kanayaputru (Pancreas CA)	75%
5.	Karuppaiputru (Uterus CA)	75%
6.	Kudalputru (Colon CA)	80%
7.	Purastha kolaputru (Prostate CA)	100%
8.	Kuralvalaiputru (Glottis CA)	66%
9.	Umizhneer kolaputru (Parotid gland CA)	100%
10.	Lasunaputru (Tonsil CA)	100%
11.	Malakudalputru (SigmoidCA)	33.3%
12.	Marbagaputru (Breast CA)	74%
13.	Veethana kolaputru (Thyroid CA)	75%
14.	Melannaputru (Upper Palate CA)	0%
15.	Naakkuputru (Tongue CA)	100%
16.	Pupusaputru (Lung CA)	83%
17.	Rathaputru (Blood CA)	100%
18.	Seviputru	100%
19.	Sinaipaiputru (Ovarian CA)	0%
20.	Siruneerpaiputru (Bladder CA)	66%
21.	Tholputru (Skin CA)	100%
22.	Vaiputru (Oral CA)	100%
23.	Viregiputru (Rectal CA)	66.6%

Figure: 22: INVESTIGATOR SENSITIVITY OF DETECTING CANCERS AMONG VARIOUS TYPES



DISCUSSION

Vippuruthi/Puttru (cancer) is a leading cause of morbidity and mortality worldwide, with approximately 14.1 million new cases and 8.2 million deaths in a year. In developing countries cancer more often results in death as it is generally diagnosed at late stage and the resources for early detection and treatment are limited. Hence, the early diagnosis and management of patients with cancer is very vital and they can be cured if diagnosed early. In order to determine the effectiveness of Naadi diagnosis of cancer, a small effort is made to throw the light over Naadi or pulse Examination. Naadi Examination is obviously non costly and can help immensely in picking up an insidious onset of a malignant condition on incidental routine examination of Naadi.

The proposed study was conducted and it is proved and established that, it can serve as a powerful tool of early cancer detection which can help the patient to take appropriate treatment at the appropriate time to get cured and extend the life span. It is important to diagnose cancer in early stage. Early detection of cancer greatly increases the chances for successful treatment. Through early diagnosis and screening we can prevent the cancer relegating to the stage of metastasis. Early detection is the key for very essential to effectively treating cancer and saving lives of cancer patients.

Considering the importance of early detection of cancer a solution was sought to evaluate a cost effective, skill based, non invasive, desk side, physical / clinical examination. Only for this purpose it was decided to conduct a clinical study and validate the traditional practice of Naadi (Siddha method of pulse perception) examination and put into practice for a routine screening of all patients for cancer. The study was unanimously approved by the Institutional Ethics Committee (IEC/9/2014-15/25) and was registered in Clinical Trials Registry of india (CTRI/2017/02/007870).

In this study two groups of patients, cancer confirmed and non cancer patients/ subjects were randomized and presented to the principal investigator through a hand –hole from behind the veil. It was only the hand that was presented through the small hole in the veil. The investigator was masked about the identity, physical stature, health status and practically everything concerning the patients /subjects. The

investigator was given adequate time to perceive the subtle variations in the differential pulse perception of Vatham, Pitham and Kabam humors manifesting through Naadi. The investigator also recorded and noted the Guru Naadi manifested in the patients. It was carefully discerned for the showing up of double impinge of the pulse over the investigators pulp of the thumb longitudinally placed over the long axis of the radial bone. The research team which randomized the cancer and non cancer patients by means of simple randomization to the investigator recorded all the case details and also collected the pulse detected information from the investigator soon after the end of the pulse examination with each trial participants to prevent bias and later manipulation. Among the research team one investigator cross examined the patient/subject (unblinded) for Naadi before presenting to the principal investigator through the veil. This open unblinded observation by the second investigator has been done prior to the principal investigator's assessment to avoid bias of the second investigator. The Naadi thus examined were compared for similarities and variations.

Before the startup of the study a pilot Naadi examination exercise was carried out by the principal investigator and the research team to standardize the pulse examination methods to adopt a similar methodology and to check for the consistency in uniform detection among the research team which included faculty of department of Noi Naadal and PG Scholars actively involved in Naadi research. During the pilot study it was ascertained that those cancer patients examined for Naadi almost always presented with Kaba vatham, Kaba pitham, Pitha kabam, etc., and the presence of double line Guru Naadi. Therefore it was decided by the research team including the investigator to conclude such Naadi presenting patients as cancer probables and others as non cancer probables. Based on the above consensus reached, the principal investigator identified and declared the cancer and non cancer probables in a blinded fashion.

The gender distribution was not of much variation in that males were 42% and females were 58% precluding gender based bias in the diagnosis. Most of the cancer patients fell under the age group 50-70 and non cancer participants were mostly under 20-50 age group. Even though there is a difference in the majority age group, blinding of principal investigator has practically ruled out any bias amongst them.

Topping the list among the types of cancer is the breast malignancy with 27 patients (22.5%) next being the uterine cancer and oral cancer. Among the 27 breast cancer patients the investigators sensitivity of detection is 74%.

The overall sensitivity of CA detection was statistically calculated from the total study population of 297 participants as 76.5% which can be explained in non technical terms as that the principal investigator was able to detect 7 cancer patients out of ten in the mixed study population correctly. The total cancer patients randomized to the investigator is 120; and 177 non cancer patients and subjects were presented is worth mentioning.

The specificity of cancer detection through the Naadi by the principal investigator was statistically calculated to be 78.5% .The principal investigator had a false positive detection of 21% and false negative detection of 22.5% which means out of 10 detected cancer cases, two cases of non cancer patients were declared to be of suffering from cancer. And among ten persons declared to be non cancer ones two patients were cancer patients with missed detection.

The probable reasons for false positivity barring the human error, could be the perception of Kaba Naadi with prominence either because of inter current respiratory illnesses, old age and the time of Naadi assessment been two to four p.m. which is the Kabam period of diurnal variation. The old age and respiratory inter current illness could not be excluded by the principal investigator owing to the blinded procedure of clinical trial.

Concerning the false negative cases, the probable reasons could be the dampening of Kaba Naadi and bounding of Pitha Naadi due to the amenability of the cancer to the treatment like surgical removal of the affected parts and burning out of the lesions by virtue of chemotherapy, rendering the patients almost cured of cancer. This was observed by the research team while investigating the reason for false negativity. In all the four cases of liver cancer the Kaba Naadi was never prominent and Pitham was greater in amplitude than usual, which has led the principal investigator to false negativity.

The specificity of the cancer detection through the Guru Naadi by the principal investigator was statistically calculated to be of 88.4% and the sensitivity of the cancer detection through Guru Naadi was 66%. The principal investigator had a false positive detection of 11.2% and false negative detection of 32.5%.

Certain Naadi patterns have a preponderance to manifest the underlying malignant conditions. For example, Naadi with Kabam as a component particularly in combination with Vatham and Pitham i.e., Kabavatham and Kabapitham have the greater preponderance to show up the underlying alarming condition which is cancer in this study. Normally the humor Kabam is implicated in the conditions of terminal illnesses and incurability which is substantiated by the quoting " சேட்ப சீதமாய்த் துடைத்துப் " by Sage Theraiyar. Sathaga Naadi also states that the combination of Kabam with Vatham in any possible proportion, (i.e. Vatha Kabam and Kaba Vatham) is a state of incurability. The combination of Kaba Vatham in which Kabam is excess is seriously indicative of underlying alarming condition i.e. cancer in this study.

It is estimated from this study that, the sensitivity of detecting cancer by the investigator is 76.5%. When the Kabavatham Naadi was presented the probability of the presence of underlying incurable or serious malignant condition was 80.3%. When the Kabapitham Naadi was presented the probability of the presence of underlying incurable or serious malignant condition was 71%. The two Naadi patterns *Kaba vatham* and *Kaba pitham* themselves constituted 50% manifestation in the cancer group patients. In non-cancer patients Kabavatham and Kabapitham together constituted around 24% in the general study population. Much importance has been given for the double line Guru Naadi pulsation in the detection of cancer. Among the 66% percentage of cancer patients who presented with doubleline gurunadi the Kabavatham Naadi was co-presented in 80%. This finding substantiates the importance of double line Guru Naadi which is pathognomonic of underlying serious illness and here cancer in this study. But even in the absence of double line Guru Naadi, when the patient exhibited Kaba vatham the investigator confidently attributed to probable cancer diagnosis. This Kaba vatha Naadi finding happened to be accurate in the prediction of underlying serious illness (Cancer here) even when the double line Guru Naadi was not manifested. The Kaba Vatha Naadi was presented in 5.6% of the non cancer patients whereas in cancer patients it was presented by 34% of them.

In this study, the investigator attributed almost all Kaba Vatha Naadi manifesting participants as to be probable cases of cancer while doing so there was a false positivity of 80% though in a very small percentage of non-cancer patients and subjects whereas, all (41/41=100%) the cancer patients who exhibited Kaba Vatha

Naadi were picked up by the investigator as cancer probables without missing even a single case. Therefore it can be categorically stated that, the sensitivity of detecting cancer in Kaba Vatha Naadi exhibiting cancer patients was 100%. Therefore the Kaba Vatha Naadi when detected perfectly in cancer patients will be a perfect screening test for diagnosis.

Similarly in the case of Kaba Pitha Naadi the investigator had a sensitivity of 92.5% in detecting the cancer patients in this study. Though there was false positivity while detecting with Kaba Pitham, this Naadi combination was presented only by a meagre 6.2% of normal subjects/non cancer patients. Because of the high sensitivity of Kaba Pitha Naadi in cancer, this Naadi pattern was also very useful in screening of the cancer patients.

Any screening test will serve its purpose when the sensitivity of the test is high, less expensive, less time consuming and could be done with simple skill and training. In this manner this Naadi examination is a perfect fit to be a screening test to detect alarming conditions like cancer.

The salient points to detect the probable cancer cases are standardized as hereunder:

- Presence of Kabavatha Naadi on repeated examinations excluding senility.
- Presence of sharp beats of Kabam excluding the respiratory ailments.
- Presenting of Kabapitha Naadi on repeated examinations.
- Manifestation of double line beats of Guru Naadi.

When the above guidelines are followed, though it might be picking up some non cancer persons, the chance of missing cancer patients is very low. Hence Naadi examination following these guidelines is highly reliable as a screening test.

CONCLUSION

Summarizing and analyzing the results of the randomized control study it is concluded that Naadi examination is a reliable tool of cost effective screening and diagnostic method. This study has thrown light over the early detection of cancer and other serious underlying illnesses thereby helping to institute total cure to such patients. Early detection of cancer through the above validated study will enable many patients to be cured completely giving a new lease of life.

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ANNEXURE - 1



NATIONAL INSTITUTE OF SIDDHA

राष्ट्रीय सिद्ध संस्थान

Department of AYUSH- MINISTRY OF HEALTH & FAMILY WELFARE

आयुष विभाग - स्वास्थ्य एवं परिवार कल्याण मंत्रालय

GOVERNMENT OF INDIA-भारत सरकार

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F.No.NIS/6-20/IEC/15-16

Dt: 05.10.2015

CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator: Dr.R.Arivu Oli, Department of Noi Naadal	
Protocol title: A study on Naadi examination in Vippuruthi/putru - a randomized and blinded case control study	
Documents filed	1) Protocol, 2) Data Collection forms 3) SAE(Pharmacovigilance)
Clinical trial Protocol (others – Specify)	Yes
Informed consent documents	Yes
Any other documents	-
Date of IEC approval & its number	NIS/IEC/9/2014-15/25 – 26.08.2015

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study.


Chairman


Member Secretary



The Tamil Nadu Dr. M.G.R. Medical University

69, Anna Salai, Guindy, Chennai - 600 032.

This Certificate is awarded to Dr/Mr/Mrs.....*R. Arivudh...*.....

for participating as Resource Person / Delegate in the Eighteenth Workshop on

“ RESEARCH METHODOLOGY & BIOSTATISTICS ”

FOR AYUSH POST GRADUATES & RESEARCHERS

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University from 20th to 24th July 2015.

[Signature]
Dr.N.KABILAN, M.D.(Siddha)
READER, DEPT. OF SIDDHA

[Signature]
Prof. **Dr.P.ARUMUGAM**, M.D.,
REGISTRAR i/c

[Signature]
Prof. **Dr.D.SHANTHARAM**, M.D., D.Diab.,
VICE - CHANCELLOR

ANNEXURE - 3



Clinical Trial Details (PDF Generation Date :- Fri, 24 Feb 2017 14:31:11 GMT)

CTRI Number	CTRI/2017/02/007870 [Registered on: 15/02/2017] - Trial Registered Retrospectively																	
Last Modified On	14/02/2017																	
Post Graduate Thesis	Yes																	
Type of Trial	Observational																	
Type of Study	Case Control Study																	
Study Design	Other																	
Public Title of Study	A Study on Naadi Examination in Cancer - a randomized and blinded case control study																	
Scientific Title of Study	A Study on Naadi Examination in Cancer - a randomized and blinded case control study																	
Secondary IDs if Any	Secondary ID	Identifier																
	NIL	NIL																
Details of Principal Investigator or overall Trial Coordinator (multi-center study)	<table border="1"> <thead> <tr> <th colspan="2">Details of Principal Investigator</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>R Arivu oli</td> </tr> <tr> <td>Designation</td> <td>PG Scholar</td> </tr> <tr> <td>Affiliation</td> <td>National Institute Of Siddha</td> </tr> <tr> <td>Address</td> <td>Department of Noi Naadal National Institute Of Siddha Tambaram Sanatorium Chennai 47 National Institute Of Siddha Tambaram Sanatorium Chennai 47 Kancheepuram TAMIL NADU 600047 India</td> </tr> <tr> <td>Phone</td> <td>7667182142</td> </tr> <tr> <td>Fax</td> <td></td> </tr> <tr> <td>Email</td> <td>drarivuoli@gmail.com</td> </tr> </tbody> </table>		Details of Principal Investigator		Name	R Arivu oli	Designation	PG Scholar	Affiliation	National Institute Of Siddha	Address	Department of Noi Naadal National Institute Of Siddha Tambaram Sanatorium Chennai 47 National Institute Of Siddha Tambaram Sanatorium Chennai 47 Kancheepuram TAMIL NADU 600047 India	Phone	7667182142	Fax		Email	drarivuoli@gmail.com
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Source of Monetary or Material Support	Source of Monetary or Material Support			
	> SIDDHA LITERATURE			
Primary Sponsor	Primary Sponsor Details			
	Name	NATIONAL INSTITUTE OF SIDDHA		
	Address	NATIONAL INSTITUTE OF SIDDHA TAMBARAM SANATORIUM CHENNAI 47		
	Type of Sponsor	Research institution and hospital		
Details of Secondary Sponsor	Name	Address		
	NIL	NIL		
Countries of Recruitment	List of Countries			
	India			
Sites of Study	Name of Principal Investigator	Name of Site	Site Address	Phone/Fax/Email
	DrR ARIVU OLI	NATIONAL INSTITUTE OF SIDDHA	National Institute Of Siddha Department Of Noinaadal Tambaram Sanatorium Chennai 47 Kancheepuram TAMIL NADU	7667182142 drarivuoli@gmail.com
Details of Ethics Committee	Name of Committee	Approval Status	Date of Approval	Is Independent Ethics Committee?
	Institutional ethics committee	Approved	27/08/2015	No
Regulatory Clearance Status from DCGI	Status	Date		
	Not Applicable	No Date Specified		
Health Condition / Problems Studied	Health Type	Condition		
	Patients	CONFIRMED CANCER CASES HEALTHY VOLUNTEERS		
Intervention / Comparator Agent	Type	Name	Details	
	Comparator Agent	NIL	NIL	
Inclusion Criteria	Inclusion Criteria			
	Age From	20.00 Year(s)		
	Age To	70.00 Year(s)		
	Gender	Both		
	Details	CONFIRMED CANCER HEALTHY VOLUNTEERS		
Exclusion Criteria	Exclusion Criteria			
	Details	BELOW AGE 20 LACTATING WOMEN VULNERABLE GROUP		
Method of Generating Random Sequence	Not Applicable			
Method of Concealment	Not Applicable			
Blinding/Masking	Investigator Blinded			



Primary Outcome	<table> <tr> <th>Outcome</th><th>Timepoints</th></tr> <tr> <td>DISTINCT FINDING OF MALIGNANT/VIPPURUTHI CONDITIONS THROUGH BLINDED NAADI EXAMINATION FINDING OF DISTINCT PATTERN OF NAADI IN MALIGNANT/VIPPURUTHI CASES EVENTHOUGH IT MAY BE NON SPECIFIC OBSERVATION AND DOCUMENTAION OF TYPES OF NAADI AND ITS ASSOCIATION WITH ANY PARTICULAR TYPE OF MALIGNANCIES</td><td>1 MONTH</td></tr> </table>	Outcome	Timepoints	DISTINCT FINDING OF MALIGNANT/VIPPURUTHI CONDITIONS THROUGH BLINDED NAADI EXAMINATION FINDING OF DISTINCT PATTERN OF NAADI IN MALIGNANT/VIPPURUTHI CASES EVENTHOUGH IT MAY BE NON SPECIFIC OBSERVATION AND DOCUMENTAION OF TYPES OF NAADI AND ITS ASSOCIATION WITH ANY PARTICULAR TYPE OF MALIGNANCIES	1 MONTH
Outcome	Timepoints				
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Secondary Outcome	<table> <tr> <th>Outcome</th><th>Timepoints</th></tr> <tr> <td>FINDING OUT THE SIDDHA INVESTIGATION PARAMETERS BY OTHER ENVAGAI THERVU, NEERKKURI, NEIKKURI, YAKKAI ILAKKANAM AND MANIKADAI NOOL FOR VIPPURUTHI PUTTRU</td><td>1 MONTH</td></tr> </table>	Outcome	Timepoints	FINDING OUT THE SIDDHA INVESTIGATION PARAMETERS BY OTHER ENVAGAI THERVU, NEERKKURI, NEIKKURI, YAKKAI ILAKKANAM AND MANIKADAI NOOL FOR VIPPURUTHI PUTTRU	1 MONTH
Outcome	Timepoints				
FINDING OUT THE SIDDHA INVESTIGATION PARAMETERS BY OTHER ENVAGAI THERVU, NEERKKURI, NEIKKURI, YAKKAI ILAKKANAM AND MANIKADAI NOOL FOR VIPPURUTHI PUTTRU	1 MONTH				
Target Sample Size	Total Sample Size=150 Sample Size from India=150				
Phase of Trial	N/A				
Date of First Enrollment (India)	03/10/2016				
Date of First Enrollment (Global)	No Date Specified				
Estimated Duration of Trial	Years=1 Months=0 Days=0				
Recruitment Status of Trial (Global)	Not Applicable				
Recruitment Status of Trial (India)	Open to Recruitment				
Publication Details	NIL				
Brief Summary	<p>The "Brief Summary" or "Study Synopsis" is a summary of the study, including the purpose, objectives, design, methods, results, and conclusions. It is a key document for the study and is used to inform the public and the regulatory authorities.</p> <p>The "Brief Summary" is a summary of the study, including the purpose, objectives, design, methods, results, and conclusions. It is a key document for the study and is used to inform the public and the regulatory authorities.</p>				

ANNEXURE - 4

Naadi Assessment form no – 1

S.no.	Name,age and sex	Naadi felt	Probable diagnosis A or B	Actual diagnosis	Sign of Faculty

ANNEXURE - 5

Naadi Assessment form no – 2

S.No.	Naadi felt	Probable Diagnosis A OR B	Actual Diagnosis	Sign of Faculty

ANNEXURE - 6

Naadi Assessment form no – 3

S.no.	Name, age sex	Confirmed diagnosis	Naadi felt by Investigator	Naadi felt at cross investigation by other expert	Probable diagnosis by Principal Investigator A or B	Sign of Faculty

ANNEXURE - 7

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A Study on Naadi Examination in Vippuruthi/Putru – A Randomized and blinded Case Control Study.

FORM IV - INFORMED WRITTEN CONSENT FORM

Iexercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled “ A study on “NAADI EXAMINATION IN VIPPURUTHI/PUTRU ”. I may be asked to give urine and blood samples during the study.

I have been informed about the study to my satisfaction by the attending investigator about the purpose of this trial, the nature of study and the laboratory investigations. I also give my consent to publish my study results in scientific conferences and reputed scientific journals for the betterment of clinical research.

I am also aware of my right to opt out of the trial at any time during the course of the trial without having to give the reasons for doing so.

Signature /thumb impression of the patient :

Date :

Name of the patient :

Signature of the investigator :

Date :

Head of the Department :

தேசிய சித்த மருத்துவ நிறுவனம், சென்னை-47.

நோய் நாடல் துறை

“விப்புருதி”நோயை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்வு”

ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் - ந்த ஆய்வை குறித்த அனைத்து விபரங்களையும் நோயாளிக்கு புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி :

கையொப்பம் :

- டம்:

பெயர் :

நோயாளியின் ஒப்புதல்

நான், _____ என்னுடைய சுதந்திரமாக தேர்வு செய்யும் உரிமையைக் கொண்டு - ந்கு தலைப்பிடப்பட்ட “விப்புருதி”நோயை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்விற்கு என்னை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

என்னிடம் - ந்தமருத்துவ ஆய்வின் காரணத்தையும், மருத்துவ ஆய்வுக்கூட பரிசோதனைகள் பற்றி திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் - ந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல், எப்பொழுது வேண்டுமானாலும் - ந்த ஆய்விலிருந்து என்னை விடுவித்து கொள்ளும் உரிமையை தெரிந்திருக்கின்றேன்.

கையொப்பம் :

பெயர் :

தேதி :

சாட்சிக்காரர் கையொப்பம்:

- டம் :

பெயர் :

உறவுமுறை :

ANNEXURE - 8

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A Study on Naadi Examination in Vippuruthi/Puttru – A Randomized and blinded Case Control Study.

FORM IV- A - PATIENT INFORMATION SHEET

PURPOSE OF RESEARCH AND BENEFITS:

The diagnostic research study in which your participation is proposed to assess a study on naadi examination in vippuruthi patients. Knowledge gained from this study would be of benefit to patients suffering from such conditions for the diagnosis and prognosis.

STUDY PROCEDURE:

You will be interviewed and examined as OP and IP patients at the study centre. At the first visit the physician will conduct a brief physical examination and assess the condition followed by Envagai thervu examination. After matching the inclusion criteria you will be included in this study and you will be examined on the basis of Envagai thervu.

CONFIDENTIALITY:

Your medical records will be treated with confidentiality and will be revealed only to other doctors / scientists. The results of this study may be published in a scientific journal, but you will not be identified by your name.

YOUR PARTICIPATION AND YOUR RIGHTS:

Your participation in this study is voluntary and you may be withdrawn from this study anytime without having to give reasons for the same. You will be informed about the findings that occur during the study. If you do agree to take part in this study, your health record will need to be made available to the investigators. If you

don't wish to participate at any stage, the level of care you receive will in no way to be affected.

The Ethics committee cleared the study for undertaking at OPD and IPD, NIS. Should any question arise with regards to this study you contact following person.

P.G student:

Dr. R. Arivuoli,MD(S)- pg scholar
Department of Noi Naadal
National Institute of Siddha
Chennai - 600 047.

தேசிய சித்த மருத்துவ நிறுவனம், சென்னை-47.

நோய் நாடல் துறை

“விப்புருதி /புற்று”நோயை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்வு”

நோயாளியின் தகவல் படிவம்

ஆய்வின் நோக்கமும் பயனும்:

தாங்கள் பங்கேற்கும் இவ்வாய்வு “விப்புருதி /புற்று”நோயை நாடி மூலம்

கணிப்பதற்கான மருத்துவ ஆய்வு” சித்த மருத்துவ முறையில் நோயை கணிப்பதற்கான ஓர் ஆய்வுமுறை. - வ்வாய்வு தங்களின் நோய்கணிப்பை பற்றியும் நோயின் போக்கை பற்றியும் அறிய உதவும்.

ஆய்வு முறை:

தாங்கள் நோய்காணல் மற்றும் பரிசோதனைகளின் மூலம் உள்நோயாளி, வெளிநோயாளி பிரிவில் ஆய்வு செய்யப்படுவீர்கள். முதல் நோய்காணலின்போது ஆய்வாளரால் உடல் பரிசோதனை செய்து குறிப்பிட்ட குறிகுணங்கள் - ரூப்பின் - வ்வாய்விற்காக எடுத்துக்கொள்ளப்படுவீர்கள்.

மந்தணம் :

தங்களின் மருத்துவ ஆவணங்கள் அனைத்தும் மருத்துவர், ஆய்வாளர் அல்லாத பிறரிடம் தெரிவிக்கப்படமாட்டாது.

நோயாளியின் பங்களிப்பும் உரிமைகளும்:

- வ்வாய்வில் தங்களின் பங்கேற்பு தன்னிச்சையானது. - வ்வாய்வில் தாங்கள் ஒத்துழைக்க - யலவில்லையெனில் எப்பொழுது வேண்டுமானாலும் காரணம் எதுவும் கூறாமல் விலகிக்கொள்ளலாம். - வ்வாய்வின்போது அறியப்படும் தகவல்கள்

தங்களுக்கு தெரிவிக்கப்படும். நோயாளியின் ஒப்புதலுக்கிணங்க நோய்கணிப்பு விவரங்களை ஆய்வாளர் பயன்படுத்திக்கொள்வார். நோயாளி ஆய்வினிடையே ஒத்துழைக்க மறுத்தாலும் எந்த நிலையிலும் நோயாளியை கவனிக்கும் விதம் பாதிக்கப்பட மாட்டாது. நிறுவன நெறிமுறை குழுவும் (Institutional Ethical committee) மேற்கண்ட ஆய்வினை மேற்கொள்ள ஒப்புதல் அளித்துள்ளது.

ஆய்வு குறித்த சந்தேகங்கள் - ரூப்பின் கீழ்க்கண்ட நபரை தொடர்பு கொள்ளவும்.

பட்டமேற்படிப்பாளர் :

மரு. இரா.அறிவு ஒளி MD(S)

நோய் நாடல் துறை

தேசிய சித்த மருத்துவ நிறுவனம்,

சென்னை-47.

மின் அஞ்சல் – drarivuoli@gmail.com

தொலைபேசி எண்- 7667182142

ANNEXURE - 9

**DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A Study on Naadi Examination in Vippuruthi/Puttru –
A Randomized and blinded Case Control Study**

FORM I - SCREENING AND SELECTION PROFORM

1. O.P.No _____ 2. I.P No _____ 3. Bed No: _____ 4. S.No: _____

5. Name: _____ 6. Age (years): 7. Gender: ☐ ☐

8. Occupation: _____ 9. Income: _____

10. Address: _____

11. Contact Nos: _____

12. E-mail : _____

INCLUSION CRITERIA

YES NO

- | | | |
|-----------------------|--------------------------|--------------------------|
| 1. Age 20-70yrs. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Cancer patient | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Healthy volunteers | <input type="checkbox"/> | <input type="checkbox"/> |

EXCLUSION CRITERIA

YES NO

- | | | |
|--|--------------------------|--------------------------|
| 1. Age below 20 | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Vulnerable group (Pregnancy, Lactation, Insane) | <input type="checkbox"/> | <input type="checkbox"/> |

Date :

P.G Student

Faculty

ANNEXURE - 10

DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A Study on Naadi Examination in Vippuruthi/Puttru -
A Randomized and blinded Case Control Study
FORM I A - HISTORY PROFORMA

1. Sl.No of the case: _____

2. Name: _____ Height: _____ cms Weight: _____ Kg

3. Age (years): _____ DOB

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--	--	--	--

D D M M Y E A R

4. Educational Status:

1) Illiterate ☐ 2) Literate ☐ 3) Student ☐ 4) Graduate/Postgraduate ☐

5. Nature of work:

1) Sedentary work ☐
2) Field work with physical labour ☐
3) Field work Executive ☐

6. Complaints and Duration:

7. History of present illness:

8. History of illness:

1. Yes

2. No

Systemic hypertension

☐
☐

Ischemic heart disease

☐
☐

Hepatitis B and C

☐
☐

Diabetes mellitus

☐
☐

Bronchial asthma

☐
☐

Past History:

Any drug allergy

☐
☐

Any surgeries

☐
☐

Any major illnesses

☐
☐

History of medications

-

9. Habits:

1. Yes

2. No

Smoker

☐
☐

Alcoholic

☐
☐

Drug Addiction	<input type="checkbox"/>	<input type="checkbox"/>
Betel nut chewer:	<input type="checkbox"/>	<input type="checkbox"/>
Tea	<input type="checkbox"/>	<input type="checkbox"/>
Coffee	<input type="checkbox"/>	<input type="checkbox"/>
Milk	<input type="checkbox"/>	<input type="checkbox"/>
Tobacco and Pan chewing	<input type="checkbox"/>	<input type="checkbox"/>

DIET HISTORY

Type of diet	V	<input type="checkbox"/>	M	<input type="checkbox"/>
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VEGETARIAN FOODS

1. Yes

2. No

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

NON VEGETARIAN FOODS -

10. Personal history:

Marital status: Married ☐ Unmarried ☐

No. of children: Male: _____ Female: _____

Socio economic status:

11. Family history:

History of carcinoma --

Others:

12. Menstrual & Obstetric history:

Age at menarche _____ years

Gravidity ☐ Parity ☐

Duration of the menstrual cycle:

Constancy of cycle duration: 1.Regular ☐ 2.Irregular ☐

13. Occupational history:

14. NOIUTRA KALAAM

1. Kaarkaalam (Aug15-Oct14)	<input type="checkbox"/>	2.Koothirkaalam (Oct15-Dec14)	<input type="checkbox"/>
3. Munpanikaalam (Dec15-Feb14)	<input type="checkbox"/>	4.Pinpanikaalam (Feb15-Apr14)	<input type="checkbox"/>
5. Ilavenirkaalam (Apr15-June14)	<input type="checkbox"/>	6.Muthuvenirkaalam (June15-Aug14)	<input type="checkbox"/>

15. NOI UTRA NILAM

1. Kurunji (Hilly terrain)	<input type="checkbox"/>	2. Mullai (Forest range)	<input type="checkbox"/>	3. Marutham (Plains)	<input type="checkbox"/>
4. Neithal (Coastal belt)	<input type="checkbox"/>	5. Paalai (Desert)	<input type="checkbox"/>		

Date :

P.G Student

Faculty

ANNEXURE - 11

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A Study on Naadi Examination in Vippuruthi/Puttru – A
Randomized and blinded Case Control Study
FORM II - CLINICAL ASSESSMENT

1. Serial No: _____

2. Name: _____

3. Date of birth:

--	--

--	--

--	--	--	--

D D M M Y E A R

4. Age: _____ years

5. Date: _____

GENERAL EXAMINATION:

1. Height: _____ cms. BMI _____ (Weight Kg/ Height m²)

2. Weight (kg):

3. Temperature (°F):

4. Pulse rate:

5. Heart rate:

6. Respiratory rate:

7. Blood pressure:

8. Pallor:

9. Jaundice:

10. Cyanosis:

11. Lymphadenopathy:

12. Pedal edema:

13. Clubbing:

14. Jugular vein pulsation

SIDDHA SYSTEM OF EXAMINATION

[1] ENVAGAI THERVU [EIGHT-FOLD EXAMINATION]

I. NAADI (KAI KURI) (RADIAL PULSE READING)

(a) Naadi Nithanam (Pulse Appraisal)

1. Kaalam (Pulse reading season)

1. Kaarkaalam
(Rainy season)

☐

2. Koothirkaalam
(Autumn)

☐

3. Munpanikaalam
(Early winter)

☐

4. Pinpanikaalam
(Late winter)

☐

5. Ilavenirkaalam
(Early summer)

☐

6. Muthuvenirkaalam
(Late summer)

☐

2. Desam (Climate of the patient's habitat)

1. Veppam kuraivu

☐

2. Veppam miguthi

☐

3. Vayathu (Age)

1. 1 - 33yrs

☐

2. 34-66yrs

☐

3. 67-100yrs

☐

4. Udal Vanmai (General body condition)

1. Iyyalbu
(Normal built)

☐

3. Valivu
(Robust)

☐

4. Melivu
(Lean)

☐

5. Panbu (Nature)

1. Thannadai
(Playing in)

☐

2. Puranadai
(Playing out)

☐

3. Illaitthal
(Feeble)

☐

4. Kathithal
(Swelling)

☐

5. Kuthithal
(Jumping)

☐

6. Thullal
(Frisking)

☐

7. Azhutthal
(Ducking)

☐

8. Padutthal
(Lying)

☐

9. Kalatthal
(Blending)

☐

10. Munnokku
(Advancing)

☐

11. Pinnokku
(Flinching)

☐

12. Pakkamnokku
(swerving)

☐

13. Suzhalal
(Revolving)

☐

(b) Naadi nadai (Nature of Pulse)

1. Vali	<input type="checkbox"/>	2. Azhal	<input type="checkbox"/>	3. Iyyam	<input type="checkbox"/>
4. Vali Azhal	<input type="checkbox"/>	5. Azhal Vali	<input type="checkbox"/>	6. Iyya Vali	<input type="checkbox"/>
7. Vali Iyyam	<input type="checkbox"/>	8. Azhal Iyyam	<input type="checkbox"/>	9. Iyya Azhal	<input type="checkbox"/>

Time: _____ AM/PM V P K Date:

Patient Position during pulse examination:

Left HAND : [FEMALE]

Vatham	Normal	+	-
Pitham	Normal	+	-
Kapham	Normal	+	-

Right HAND:[MALE]

Vatham	Normal	+	-
Pitham	Normal	+	-
Kapham	Normal	+	-

Left: V- 1 2 3 4 5

P - 1 2 3 4 5

K- 1 2 3 4 5

Right: V- 1 2 3 4 5

P - 1 2 3 4 5

K- 1 2 3 4 5

Naadi Diagnosis –GURU NAADI -

III.NAA (TONGUE)

1. Maa Padinithiruthal (Coatedness)	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>		
2. Niram (Colour)	1.Karuppu (Dark)	<input type="checkbox"/>	2. Manjal (Yellow)	<input type="checkbox"/>	3. Veluppu (Pale)	<input type="checkbox"/>
3. Suvai (Taste sensation)	1.Pulippu (Sour)	<input type="checkbox"/>	2. Kaippu (Bitter)	<input type="checkbox"/>	3. Inippu (Sweet)	<input type="checkbox"/>
4. Vedippu (Fissure)	1. Absent	<input type="checkbox"/>	2. Present	<input type="checkbox"/>		
5. Vai neer oorai (Salivation)	1.Normal	<input type="checkbox"/>	2. Increased	<input type="checkbox"/>	3.Reduced	<input type="checkbox"/>

IV.NIRAM (COMPLEXION)

1. Karuppu ☐ 2.Manjal ☐ 3.Veluppu ☐
(Dark) (Yellowish) (Fair)

V. MOZHI (VOICE)

1. Sama oli ☐ 2 Urattha oli ☐ 3.Thazhntha oli ☐
(Medium pitched) (High pitched) (Low pitched)

VI. VIZHI (EYES)

1. Niram (Venvizhi)
(Discolouration)

1. Karuppu ☐ 2. Manjal ☐
(Dark) (Yellow)
3. Sivappu ☐ 4.Veluppu ☐
(Red) (White)
5. No Discoloration ☐

2. Kanneer 1.Normal ☐ 2. Increased ☐ 3.Reduced ☐
(Tears)

3. Erichchal 1.Present ☐ 2. Absent ☐
(Burning sensation)

4. Peelai seruthal 1.Present ☐ 2. Absent ☐
(Mucus excrements)

II. MEI KURI (PHYSICAL SIGNS)

1. Veppam 1. Mitham ☐ 2. Migu ☐ 3. Thatpam ☐
(Warmth) (Mild) (High) (Low)

2. Viyarvai 1. Increased ☐ 2. Normal ☐ 3. Reduced ☐
(Sweat)

3. Thodu vali 1. Absent ☐ 2. Present ☐
(Tenderness)

VII. MALAM (STOOLS)

1. Niram (Color)	1. Karuppu (Dark)	<input type="checkbox"/>	2. Manjal (Yellowish)	<input type="checkbox"/>
	3. Sivappu (Reddish)	<input type="checkbox"/>	4. Veluppu (Pale)	<input type="checkbox"/>
2. Sikkal (Constipation)	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>
3. Sirutthal (Poorly formed stools)	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>
4. Kalichchal (Loose watery stools)	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>
5. Seetham (Watery and mucoid excrements)	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>
6. Vemmai (Warmth)	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>
7. History of habitual constipation	1. Present	<input type="checkbox"/>	2. Absent	<input type="checkbox"/>
8. Passing of	a) Mucous	1. Yes <input type="checkbox"/>	2. No <input type="checkbox"/>	
	b) Blood	1. Yes <input type="checkbox"/>	2. No <input type="checkbox"/>	

VIII. MOOTHIRAM (URINE)

(a) NEER KURI (PHYSICAL CHARACTERISTICS)

1. Niram (colour)

Niramattrathu (Colourless)	<input type="checkbox"/>	Paal pondra cheezh (Milky purulent)	<input type="checkbox"/>	Karuppu (black)	<input type="checkbox"/>
Sivappu (Red)	<input type="checkbox"/>	Pachai (Greenish)	<input type="checkbox"/>		

2. Manam (odour)

	Yes	No
Theenattram(Ammonical)	<input type="checkbox"/>	<input type="checkbox"/>
Pazha manam(Fruity)	<input type="checkbox"/>	<input type="checkbox"/>

Others

: _____

3. Edai (Specific gravity)

Yes

No

Iyalbu (1.010-1.025)

☐
☐

(Normal)

Migu thadithu irangal(>1.025)

☐
☐

(High Specific gravity)

Laesathuvamaga irangal (<1.010)

:

☐
☐

Low Specific gravity

Laesathuvam&Seeraga irangal(1.010-1.012):

☐
☐

Low and fixed Specific gravity

4. Alavu(volume)

Yes

No

Iyalbu (1.2-1.5 lt/day)

☐
☐

(Normal)

Athineer (>2lt/day)

☐
☐

(Polyuria)

Kuraineer (<500ml/day)

☐
☐

(Oliguria)

5. Nurai(froth)

Yes

No

Niramatrathu (Clear)

☐
☐

Kalanganathu(Cloudy)

☐
☐

6. Enjal (deposits)

:

Yes

No

☐
☐

(b) NEI KURI (oil spreading sign)

1. Aravam

☐

2. Aazhi

☐

(Serpentine fashion)

(Ring)

3. Muthu

☐

4. Aravil Mothiram

☐

(Pearl beaded appear)

(Serpentine in ring fashion)

5. Aravil Muthu

☐

6. Mothirathil Muthu

☐

(Serpentine and Pearl patterns)

(Ring in pearl fashion)

7. Mothirathil Aravam

☐

8. Mellena paraval

☐

(Ring in Serpentine fashion)

(Slow spreading)

9. others: _____

[2]. MANIKADAI NOOL (Wrist circummetric sign) : _____ fbs

[3]. IYMPORIGAL /IYMPULANGAL

(Penta sensors and its modalities)

	1. Normal	2. Affected
1. Mei (skin)	<input type="checkbox"/>	<input type="checkbox"/>
2. Vaai (Mouth/ Tongue)	<input type="checkbox"/>	<input type="checkbox"/>
3. Kan (Eyes)	<input type="checkbox"/>	<input type="checkbox"/>
4. Mookku (Nose)	<input type="checkbox"/>	<input type="checkbox"/>
5. Sevi (Ears)	<input type="checkbox"/>	<input type="checkbox"/>

[4]. KANMENTHIRIYANGAL /KANMAVIDAYANGAL

(Motor machinery and its execution)

	1. Normal	2. Affected
1. Kai (Hands)	<input type="checkbox"/>	<input type="checkbox"/>
2. Kaal (Legs)	<input type="checkbox"/>	<input type="checkbox"/>
3. Vaai (Mouth)	<input type="checkbox"/>	<input type="checkbox"/>
4. Eruvai (Anal)	<input type="checkbox"/>	<input type="checkbox"/>
5. Karuvaai (Birth canal)	<input type="checkbox"/>	<input type="checkbox"/>

[5]. YAKKAI (SOMATIC TYPES)

Vatha constitution	Pitha constitution	Kaba constitution
Lean and lanky built <input type="checkbox"/>	Thin covering of bones and joints <input type="checkbox"/>	Plumpy joints and limbs <input type="checkbox"/>
Hefty proximities of limbs <input type="checkbox"/>	by soft tissue	Broad forehead and chest <input type="checkbox"/>
Cracking sound of joints on walking <input type="checkbox"/>	Always found with warmth, sweating and offensive body odour <input type="checkbox"/>	Sparkling eyes with clear sight <input type="checkbox"/>
Dark and thicker eye lashes <input type="checkbox"/>	Wrinkles in the skin <input type="checkbox"/>	Lolling walk <input type="checkbox"/>
Dark and light admixed complexion <input type="checkbox"/>	Red and yellow admixed complexion <input type="checkbox"/>	Immense strength despite poor eating <input type="checkbox"/>
Split hair <input type="checkbox"/>	Easily suffusing eyes due to heat and alcohol <input type="checkbox"/>	High tolerance to hunger, thirst and fear <input type="checkbox"/>
Clear words <input type="checkbox"/>	Sparse hair with greying <input type="checkbox"/>	Exemplary character with good memory power <input type="checkbox"/>
Scant appetite for cold food items <input type="checkbox"/>	Intolerance to hunger, thirst and heat <input type="checkbox"/>	More liking for sweet taste <input type="checkbox"/>
Poor strength despite much eating <input type="checkbox"/>	Inclination towards perfumes like sandal <input type="checkbox"/>	Husky voice <input type="checkbox"/>
Loss of libido <input type="checkbox"/>	Slender eye lashes <input type="checkbox"/>	
In generosity <input type="checkbox"/>	Pimples and moles are plenty <input type="checkbox"/>	
Sleeping with eyes half closed <input type="checkbox"/>		

RESULTANT SOMATIC TYPE: _____

[6] GUNAM

1. Sathuva Gunam ☐ 2. Rajo Gunam ☐ 3. Thamo Gunam ☐

[7] UYIR THATHUKKAL

A. VALI

	1. Normal	2. Affected
1. Praanan (Heart centre)	<input type="checkbox"/>	<input type="checkbox"/>
2. Abaanan (Medial of muladhar centre)	<input type="checkbox"/>	<input type="checkbox"/>
3. . Viyaanan (Throat centre)	<input type="checkbox"/>	<input type="checkbox"/>
4. Udhaanan (Forehead centre)	<input type="checkbox"/>	<input type="checkbox"/>
5. Samaanan (Navel centre)	<input type="checkbox"/>	<input type="checkbox"/>
6. Naahan (Higher intellectual function)	<input type="checkbox"/>	<input type="checkbox"/>
7. Koorman (Air of yawning)	<input type="checkbox"/>	<input type="checkbox"/>
8. Kirukaran (Air of salivation and nasal secretions)	<input type="checkbox"/>	<input type="checkbox"/>
9. Devathathan (Air of laziness)	<input type="checkbox"/>	<input type="checkbox"/>
10. Dhananjeyan (Air that acts on death)	<input type="checkbox"/>	<input type="checkbox"/>

B. AZHAL

	1. Normal	2. Affected
1. Anala pittham (Gastric juice)	<input type="checkbox"/>	<input type="checkbox"/>
2. Ranjaka pittham (Haemoglobin)	<input type="checkbox"/>	<input type="checkbox"/>
3. Saathaka pittham (Life energy)	<input type="checkbox"/>	<input type="checkbox"/>
4. Prasaka pittham (Bile)	<input type="checkbox"/>	<input type="checkbox"/>
5. Aalosaka pittham (Aqueous Humour)	<input type="checkbox"/>	<input type="checkbox"/>

C. IYYAM

	1. Normal	2. Affected
1. Avalambagam (Serum)	<input type="checkbox"/>	<input type="checkbox"/>
2. Kilethagam (saliva)	<input type="checkbox"/>	<input type="checkbox"/>
3. Pothagam (lymph)	<input type="checkbox"/>	<input type="checkbox"/>
4. Tharpagam (cerebrospinal fluid)	<input type="checkbox"/>	<input type="checkbox"/>
5. Santhigam (Synovial fluid)	<input type="checkbox"/>	<input type="checkbox"/>

[8] UDAL THATHUKKAL

- 1.Saram -
- 2.Cenneer -
- 3.Oon -
- 4.Kozhuppu -
- 5.Enbu -
- 6.Moolai -
- 7.Sukkilam/Suronitham -

Date :

P.G Student

Lecture

ANNEXURE - 12

**DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A Study on Naadi Examination in Vippuruthi/Puttru – A Randomized and blinded
Case Control Study.**

FORM-III-DOCUMENTATION OF ADDITIONAL INFORMATION

1. O.P No: _____ Lab.No _____ Serial No _____

2. Name: _____

3. Date of birth :

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D D M M Y E A R

4. Age : _____ years

5. Date of assessment: _____

OTHER INVESTIGATIONS:

Date s :

P.G Student

Faculty